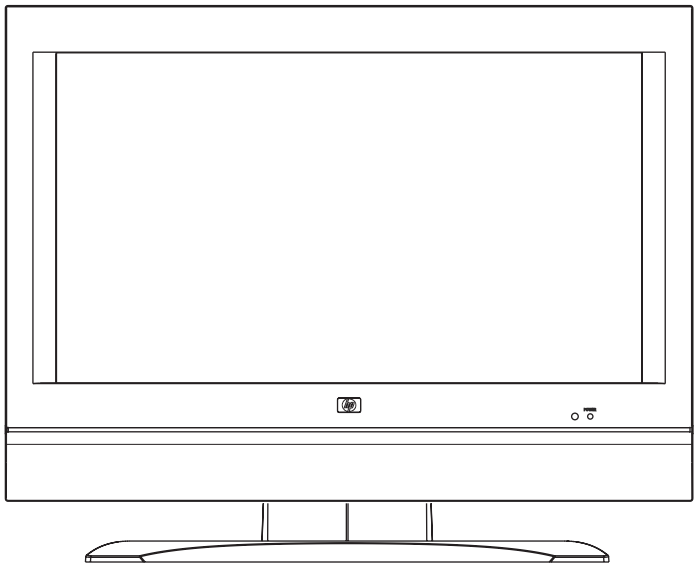
SERVICE MANUAL



HP LCD High-Definition Television

MODEL
HP LC3260N

In the interest of user safety (required by safety regulations in some countries/regions) the set should be restored to its original condition and only parts identical to those specified should be used.

This document has been published to be used for after sales service only.

The contents are subject to change without notice.

Part number: 5991-4917

Revision 031306

invent

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. BE CAREFUL WITH THE LCD PANEL

Avoid a shock to the panel while servicing. Take enough care to deal with it.

5. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

6. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Earphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

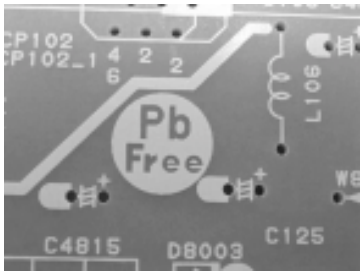
IMPORTANT

When you exchange IC and Transistor with a heat sink, apply silicon grease (YG6260M) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease.
(Old grease may cause damage to the IC and Transistor).

ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Caution:

- Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 86°F~104°F(30°C~40°C) higher.
  Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).
  In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

CONTENTS

SERVICING NOTICES ON CHECKING A1-1
HOW TO ORDER PARTS A1-1
IMPORTANT A1-1
ABOUT LEAD FREE SOLDER (PbF) A1-2
CONTENTS A2-1
GENERAL SPECIFICATIONS ..... A3-1~A3-5
DISASSEMBLY INSTRUCTIONS
1. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC B-1, B-2
SERVICE MODE LIST C-1
WHEN REPLACING EEPROM (MEMORY) IC C-2
RE-WRITE FOR DIGITAL SOFT FIRMWARE C-3
ELECTRICAL ADJUSTMENTS ..... D-1~D-3
TROUBLESHOOTING GUIDE ..... E-1~E-7
BLOCK DIAGRAM
SCALER/LVDS/MICON/ADC/JACK/AV SWITCH1/REGULATOR F-1, F-2
AV SWITCH2/STEREO/SOUND AMP F-3, F-4
TUNER/DIGITAL/POWER F-5, F-6
INTERFACE F-7, F-8
MICON2 ..... F-9, F-10
PRINTED CIRCUIT BOARDS
AV ..... G-1~G-4
SCALER ..... G-5~G-8
DIGITAL G-9, G-10
POWER/REMOCON/OPERATION ..... G-11~G-14
SCHEMATIC DIAGRAMS
AV SWITCH2 ..... H-1, H-2
AV JACK H-3, H-4
TUNER/OUT JAC H-5, H-6
STEREO H-7, H-8
SOUND AMP/HEADPHONE AMP H-9, H-10
POWER H-11, H-12
AV JACK2 ..... H-13, H-14
TUNER H-15, H-16
MICON H-17, H-18
SCALER H-19, H-20
ADC1 ..... H-21, H-21
LVDS H-23, H-24
JACK H-25, H-26
AV SWITCH1 ..... H-27, H-28
REGULATOR H-29, H-30
INTERFACE_HDMI IC H-31, H-32
HDMI MICON2 ..... H-33, H-34
ASIC H-35, H-36
SDRAM H-37, H-38
FLASH H-39, H-40
FRONT END H-41, H-42
AV OUT H-43, H-44
POWER2 ..... H-45, H-46
POWER3 ..... H-47, H-48
OPERATION/REMOCON H-49, H-50
INTERCONNECTION DIAGRAM H-51, H-52
WAVEFORMS ..... I-1~I-3
MECHANICAL EXPLODED VIEWS J-1, J-2
MECHANICAL REPLACEMENT PARTS LIST K1-1
ELECTRICAL REPLACEMENT PARTS LIST K2-1

GENERAL SPECIFICATIONS

G-1	**TV System**	LCD	LCD Size / Visual Size		31.5 inch / 800.4mmV
			LCD Type		Color TFT LCD
			Number of Pixels		1366(H) x 768(V)
			View Range	Left/Right	85/85 degree
				Up/Down	85/85 degree
		Color System			NTSC
		Speaker			2 Speaker
			Position		Front
			Size		2.2 x 5.0 inch
			Impedance		4 ohm
		Sound Output	Max		10W + 10W
			10%(Typical)		---
G-2	**Tuning System**	Broadcasting System	Analog		US System M
			Digital		ATSC(8VSB)/QAM
		Tuner and Receive CH	System		1Tuner
			Destination		US (W/CABLE)
			CH Coverage		2~69, 4A, A-5~A-1, A~I, J~W, W+1~W+84
		Intermediate Frequency Digital			44.00MHz
		Analog	Picture(FP)		45.75MHz
			Sound(FS)		41.25MHz
			FP-FS		4.50MHz
		Preset CH			No
		Stereo/Dual TV Sound			US-Stereo
		Tuner Sound Muting			Yes
G-3	**Signal**	Video Signal	Input Level		1 V p-p/75 ohm
			Output Level		--
			S/N Ratio (Weighted)		--
			Horizontal Resolution at DVD Mode		--
					--
		RGB Signal	Output Level		--
		Audio Signal	Input Level		0.85 V p-p/50k ohm
			Output Level	at DVD	--
				at TV	0.85 V p-p/1k ohm
					0-1.70 V p-p/1k ohm (Variable out mode)
			Digital Output Level		0.5 V p-p/75 ohm
			S/N Ratio at DVD (Weighted)		--
			Harmonic Distortion		--
			Frequency Response :	at DVD	--
				at Video CD	--
				at SVCD	--
				at CD	--
G-4	**Power**	Power Source	AC		120V, 60Hz
			DC		--
		Power Consumption		at AC	170W at 120V 60Hz
				at DC	--
			Stand by (at AC)		1W at 120V 60Hz
			Energy Star		Yes
			Per Year		-- kWh/Year
		Protector	Power Fuse		Yes
			Safety Circuit		Yes
			IC Protector(Micro Fuse)		Yes
G-5	**Regulation**		Safety		UL/CSA
			Radiation		FCC/IC
			Laser		--
G-6	**Temperature**		Operation		0oC ~ +40oC
			Storage		-20oC ~ +60oC
G-7	**Operating Humidity**				Less than 80% RH
G-8	**Clock and Timer**	Clock			Yes
		Sleep Timer	Max Time		120 Min
			Step		10 Min
		On Timer	Program		No
		Off Timer	Program		No
		Game Timer			No
		Wake Up Timer			No
		Timer Back-up (at Power Off Mode) more than			-- Min Sec

GENERAL SPECIFICATIONS

G-9	**Remote Control**	Unit		RC-MS
		Glow in Dark Remocon		No
		Remocon Format		HP
		Format		RC-6
		Custom Code		HP 21bit
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		35 Keys
		Keys	POWER	Yes
			SAP/MTS	Yes
			Sound	Yes
			Picture	Yes
			Source	Yes
			Menu	Yes
			Left	Yes
			OK	Yes
			Right	Yes
			Up	Yes
			Down	Yes
			back	Yes
			Aspect	Yes
			Info	Yes
			VOL+	Yes
			VOL-	Yes
			CH+	Yes
			CH-	Yes
			Last	Yes
			Mute	Yes
			CC	Yes
			Sleep	Yes
			Ant	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			_	Yes
			Enter	Yes

GENERAL SPECIFICATIONS

G-10	**Features**	Auto Shut Off		Yes
		Auto Search		No
		Power On Memory		No
		Comb Filter		Yes 3 -D
		Game Position		No
		Auto Setup(Language/CH Program)		No
		Picture Setting(TV)		Yes
			AV Mode(Picture Preference)	Yes
			Brightness , Contrast , Color	Yes
			Tint	Yes
			Sharpness	Yes
			Color Temperature	Yes
			Cable Clear	No
		Picture Setting(PC)		No
			BRIGHTNESS , CONTRAST	No
			HOR POSITION , VER POSITION	No
			PHASE , CLOCK	No
			AUTO ADJUST	No
			RED , GREEN , BLUE	No
		Audio	MTS	Yes
			Tone Control (Bass/Treble/Balance)	Yes
			Stable Sound	No
			Surround	No
			BBE	No
			SRS WOW (SRS 3D/Focus/Tru Bass)	Yes
			Valiable Audio Out	Yes
		Tuning	CH Program	Yes
			Air/Cable	Yes
			ADD/DELETE	Yes
		Label	CH Label	Yes
			Video Label	Yes
		Favorite CH		No
		V-Chip		Yes
			Type	USA Type
		RRT Setup		Yes
		Lock	Hotel Lock	No
			Channel Lock	No
			Video Lock	No
			Panel Lock	No
		OSD Language		English French
		Closed Caption		Yes
		CC Advanced		Yes
		View Mode (Picture Size)		Yes
		Picture Scroll		Yes
		Cinema Mode		Yes
		Aspect		Yes
		Backlight		Yes
		PFC(Power Factor circuit)		No
		Freeze frame		No
		PIP/POP		No
		Direct Input Selection		Yes
		Digital Out	Dolby Digital	Yes
			MPEG	No
			PCM	Yes
			DTS	No
		PC Monitor Input		No
			VGA (640x480)	No
			VGA (720x400)	No
			WVGA (848x480)	No
			SVGA (800x600)	No
			XGA (1024x768)	No
			WXGA (1280x768)	No
			WXGA (1280x720)	No
			WXGA (1360x768)	No
			SXGA (1280x1024)	No

GENERAL SPECIFICATIONS

		HDMI Input		Yes
			VGA (640×480)	Yes (60Hz)
			720X480i (4:3)	Yes (60Hz)
			720X480i (16:9)	Yes (60Hz)
			720X480p (4:3)	Yes (60Hz)
			720X480p (16:9)	Yes (60Hz)
			720X576i (4:3)	No
			720X576i (16:9)	No
			720X576p (4:3)	No
			720X576p (16:9)	No
			1280X720p	Yes (60Hz)
			1920X1080i	Yes (60Hz)
		Component Input		Yes
			720X480i (4:3)	Yes (60Hz)
			720X480i (16:9)	Yes (60Hz)
			720X480p (4:3)	Yes (60Hz)
			720X480p (16:9)	Yes (60Hz)
			720X576i (4:3)	No
			720X576i (16:9)	No
			720X576p (4:3)	No
			720X576p (16:9)	No
			1280X720p	Yes (60Hz)
			1920X1080i	Yes (60Hz)
G-11	**Accessories**	Owner's Manual	Language	English/French/Spanish
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	--
			Terminal	--
		Loop Antenna		No
			Terminal	--
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		Quick Set-up Sheet		No
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Adapter		No
		AC Cord (for AC Adapter)		No
		AC Cord (Flat Polarity Plugs)		Yes
		Cable Cramp		Yes
		Stand		Yes
		Stand Screw		Yes
		Hexagon Wrench		Yes
		“ Start here" booklet		Yes
		Warranty and support guide		Yes
		Flyer		Yes
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		No
		300 to 75ohm Antenna Adapter		No

GENERAL SPECIFICATIONS

G-12	**Interface**	Switch	Top	Power (Tact)	Yes
				Channel Up/Menu Up	Yes
				Channel Down/Menu Down	Yes
				Volume Up/Menu >	Yes
				Volume Down/Menu <	Yes
				Menu	No
				Play	No
				Eject	No
				Skip+, Search+	No
				Skip-, Search-	No
				Still/Pause	No
				Stop	No
				Main Power SW	No
				Input Select	Yes
			Rear	Main Power SW	No
		Indicator		Power/Stand-By	Yes (Green / Red)
				On Timer	No
		Terminals	Rear	Video Input 1	RCA x 1
				Audio Input 1	RCA x 2(L/MONO, R)
				S - Input 1	Yes
				Video Input 2	RCA x 1
				Audio Input 2	RCA x 2(L/MONO, R)
				S - Input 2	Yes
				Video Output	No
				Audio Output	RCA x 2 (Variable) (L, R)
				Component Input 1	RCA x 3
				Analog Audio	RCA x 2(L/MONO, R)
				Component Input 2	RCA x 3
				Analog Audio	RCA x 2(L/MONO, R)
				HDMI Input 1	HDMI x 1
				Analog Audio	RCA x 2(L/MONO, R)
				HDMI Input 2	HDMI x 1
				Analog Audio	No
				Sub Woofer Out	No
				PC Monitor Input	No
				Analog Audio	No
				Digital Audio Output	Coaxial
				DC Jack (Center +)	No
				VHF/UHF Antenna Input	F Type
				AC Inlet	Yes
			Side	Video Input 3	No
				Audio Input 3	No
				S - Input 3	No
				Other Terminal	No
G-13	**Set Size**			Approx. W x D x H (mm)	823.0 x 279.5 x 669.0
				w/o Handle, Stand Approx. W x D x H (mm)	823.0 x 116.5 x 592.0
G-14	**Weight**			Net (Approx.)	19.5kg (43.0lbs)
				Net w/o Handle, Stand (Approx.)	17.0kg (37.5lbs)
				Gross (Approx.)	24.0kg (52.9lbs)
G-15	**Carton**		Master Carton		No
				Content	--- Sets
				Material	--- / ---
				Dimensions W x D x H(mm)	---
				Description of Origin	---
			Gift Box	Material	Double/Brown
				W/Color Photo Label	No
				W/Handle	No
				Dimensions W x D x H(mm)	917 x 318 x 716
				Description of Origin	Yes
			Drop Test		1 Corner / 3 Edges / 6 Surfaces
				Height (cm)	32(ORION SPEC:46)
			Container Stuffing (40' container)		273 Sets/40' container
G-16	**Material**		Cabinet	Front	PS 94V0 NON-DECABROM
				Rear	PS 94V0 NON-DECABROM
				Jack Panel	--
			PCB	Non-Halogen Demand	No
				Eyelet Demand	Yes
G-17	**Environment**		Environmental standard requirement		Green procurement
			Pb-free		Phase3(Phase3A)
				Measures for Whisker	Yes
			Rohs		Yes

DISASSEMBLY INSTRUCTIONS

1. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 1-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

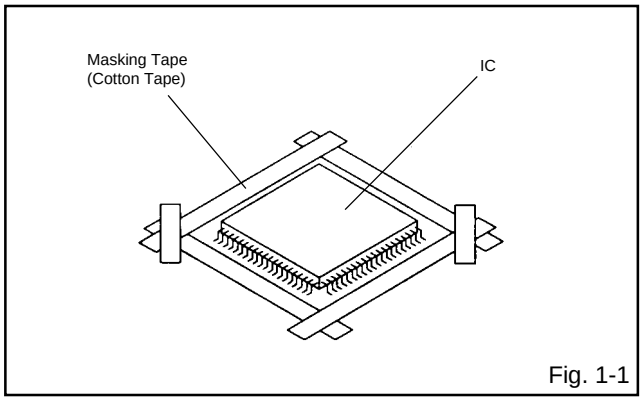


Fig. 1-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 1-2.)**

   NOTE

   Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.

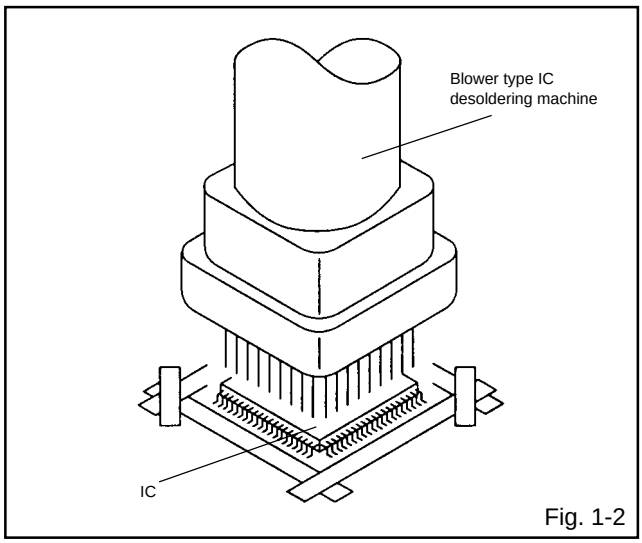


Fig. 1-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 1-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

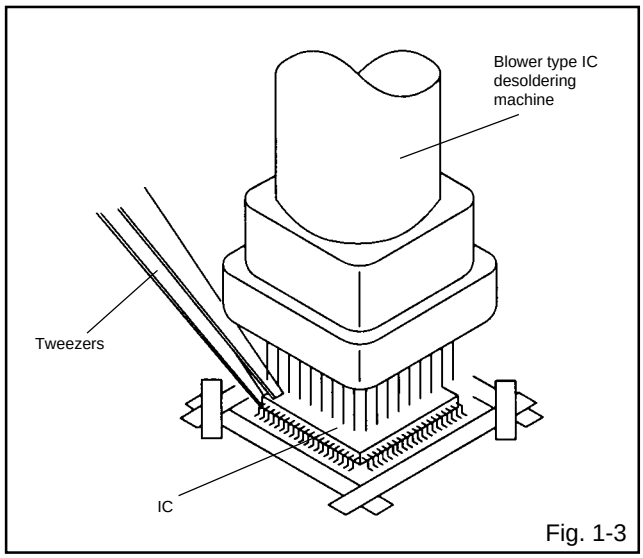


Fig. 1-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 1-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

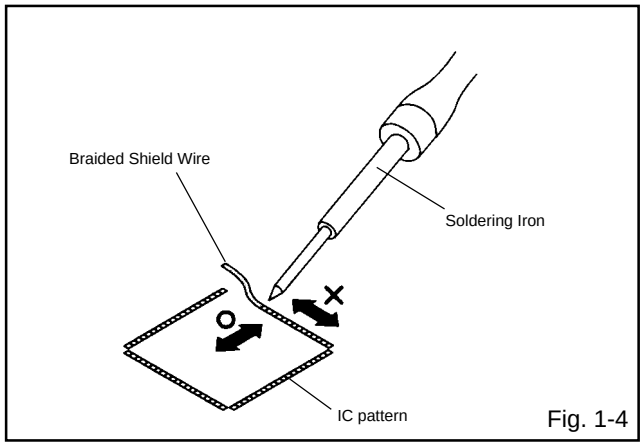


Fig. 1-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 1-5.)**

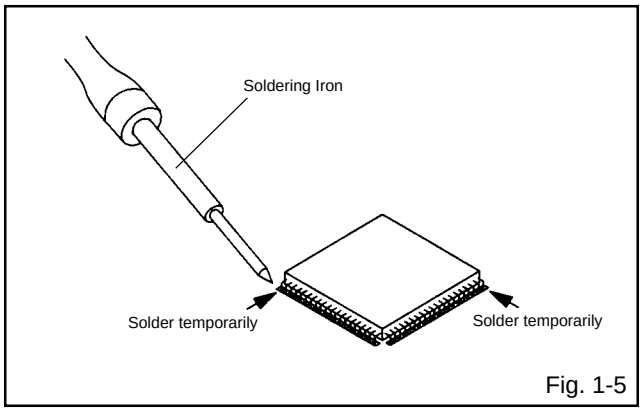


Fig. 1-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 1-6.)**

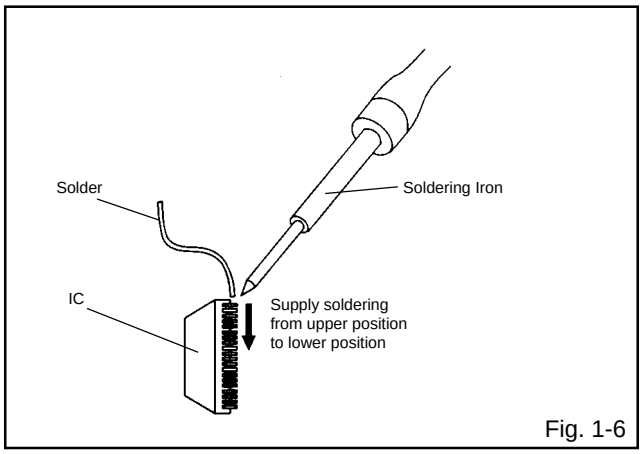


Fig. 1-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 1-7.)**

   NOTE

   Do not absorb the solder to excess.

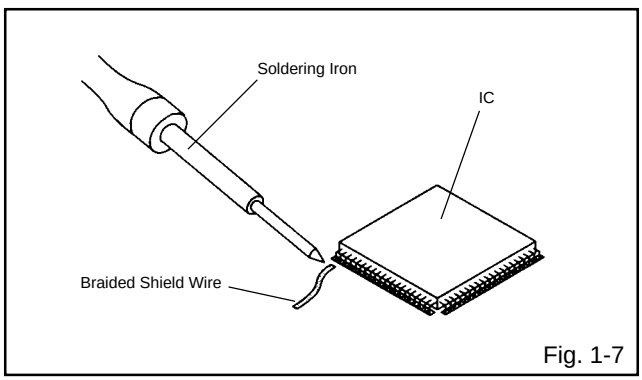


Fig. 1-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 1-8.)**

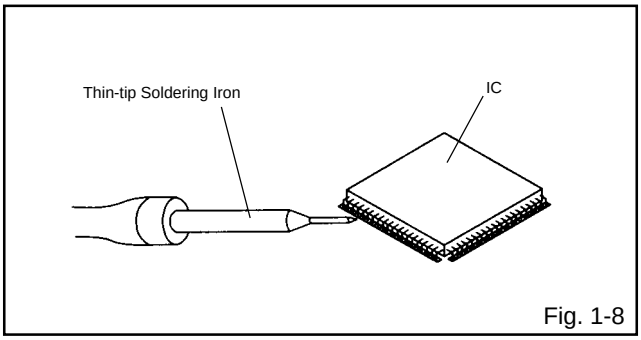


Fig. 1-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
TV mode	VOL. DOWN (Minimum)	6	2 sec.	Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA, POWER ON total hours, MICON VERSION and DIGITAL TV MICON FIRMWARE on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS, MICON VERSION AND DIGITAL TV MICON FIRMWARE

Initial total of MEMORY IC, POWER ON total hours, MICON VERSION and Digital TV MICON Firmware can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".
Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(8)** on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, POWER ON total hours, MICON VERSION and Digital TV MICON Firmware, turn off the power.

   *1 DVP1 is different according to each set.

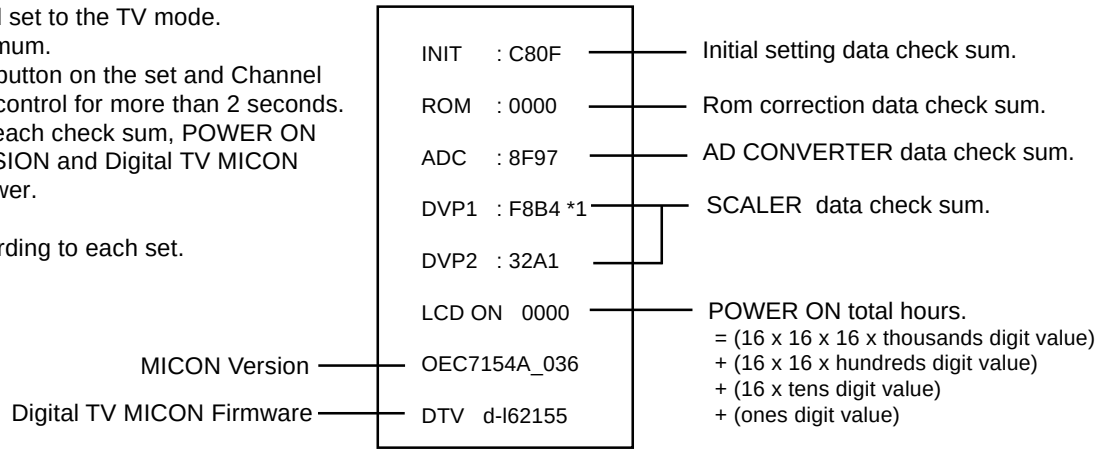


FIG. 1

CONFIRMATION OF INITIAL DATA

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 2.

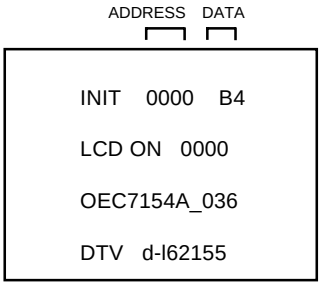


FIG. 2

4. ADDRESS is now selected and should "blink". Using the UP/DOWN buton on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 6 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

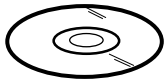
After the data input, set to the initializing of shipping.

10. Turn POWER on.
11. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
12. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

RE-WRITE FOR DIGITAL SOFT FIRMWARE

JG176 USA HD DTV ROM DISC



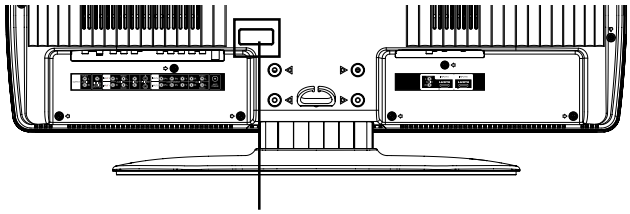
Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176095	USA HD DTV ROM DISC	Up-Date of the Firmware

NOTE: The operating manual for Re-writing is included in USA HD DTV ROM DISC (JG176).

Prepare the following tools for Up-Date of the Firmware.

1 Computer of WINDOWS2000
2 USB Flash Memory **(Use only SanDisk Cruzer Mini USB Flash Drive 256Mb)**

SET (REAR)



USB CONNECTOR

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease **(YG6260M)** on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damage to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

2. BASIC ADJUSTMENTS

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button **(9)** on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 2-1**.

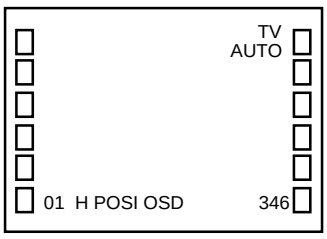


Fig. 2-1

3. Use the UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 2-2**.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for AV, CS, HDMI mode, press the INPUT button on the remote control to set to the AV, CS, HDMI mode. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
01	H POSI OSD	22	H POSI 60Hz
02	V POSI OSD	24	V POSI 60Hz
03	R DRIVE (N)	25	BAK LIGHT CENT
04	R CUTOFF (N)	26	BAK LIGHT MAX
05	G DRIVE (N)	27	BAK LIGHT MIN
06	G CUTOFF (N)	28	BRIGHT CENT
07	B DRIVE (N)	29	BRIGHT MAX
08	B CUTOFF (N)	30	BRIGHT MIN
09	R DRIVE (C)	31	TINT
10	R CUTOFF (C)	35	CONTRAST CENTER
11	G DRIVE (C)	36	CONTRAST MAX
12	G CUTOFF (C)	37	CONTRAST MIN
13	B DRIVE (C)	38	COLOR CENT
14	B CUTOFF (C)	39	COLOR MAX
15	R DRIVE (W)	40	COLOR MIN
16	R CUTOFF (W)	63	CONTRAST 40
17	G DRIVE (W)	64	BRIGHT (3F54)
18	G CUTOFF (W)	65	CONTRASR (3F54)
19	B DRIVE (W)	66	SRC TOP
20	B CUTOFF (W)	67	DFEA VIMGVT

Fig. 2-2

2-1: WHITE BALANCE

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the INPUT button on the remote control to set to the AV mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(03)** on the remote control to select “R DRIVE (N)”.
6. Press the UP/DOWN button on the remote control to select the “R CUTOFF (N)”, “B DRIVE (N)”, “B CUTOFF (N)”, “R DRIVE (C)”, “R CUTOFF (C)”, “B DRIVE (C)”, “B CUTOFF (C)”, “R DRIVE (W)”, “R CUTOFF (W)”, “B DRIVE (W)” and “B CUTOFF (W)”.
7. Adjust the RIGHT/LEFT button on the remote control to whiten the R CUTOFF (N), B DRIVE (N), B CUTOFF (N), R DRIVE (C), R CUTOFF (C), B DRIVE (C), B CUTOFF (C), R DRIVE (W), R CUTOFF (W), B DRIVE (W) and B CUTOFF (W) at each step tone sections equally.
8. Perform the above adjustments 5 and 6 until the white color is looked like a white.

ELECTRICAL ADJUSTMENTS

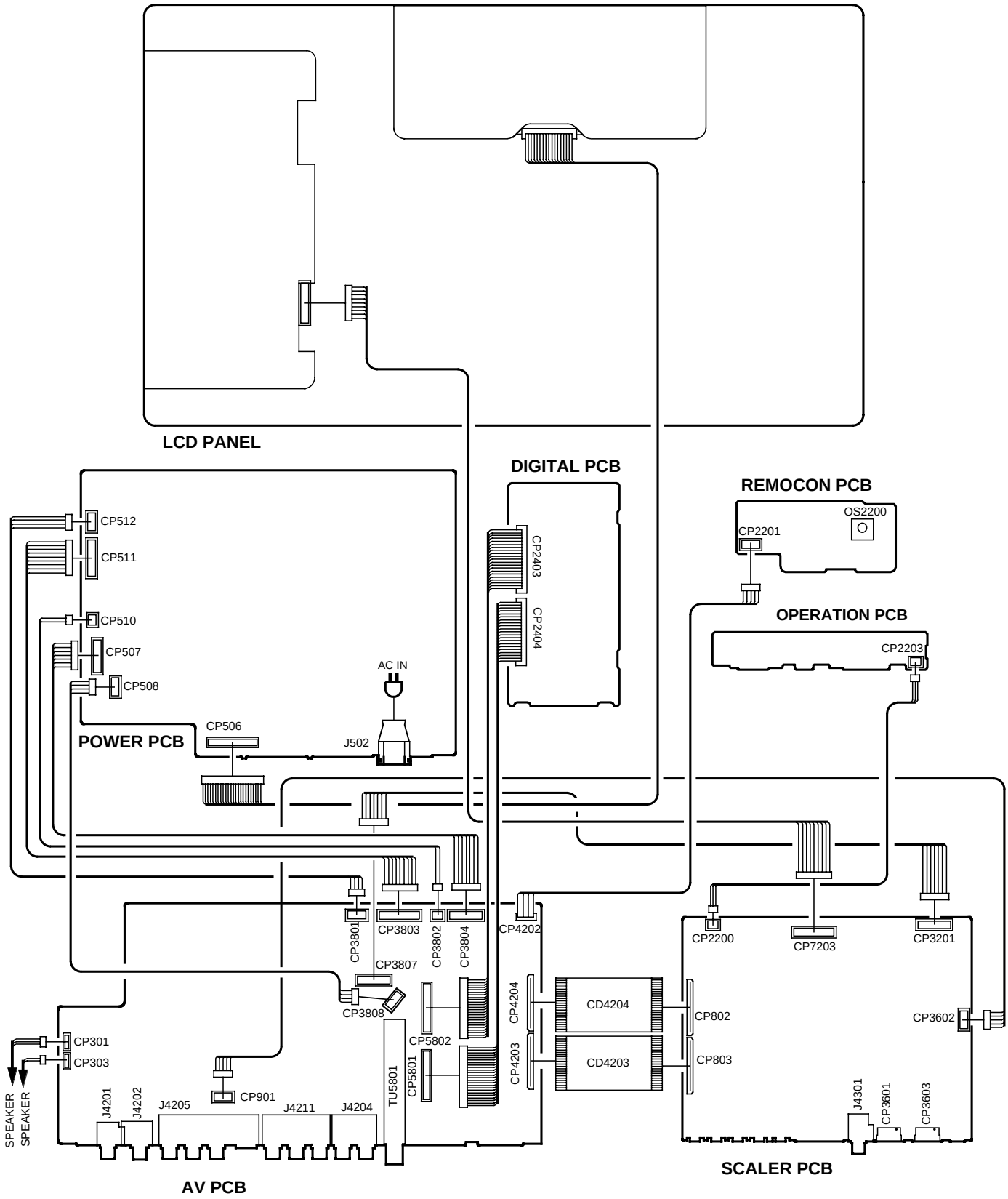
2-2: Confirmation of Fixed Value (Step No.)

Please check if the fixed values of each of the adjustment items are set correctly referring below. **(TV/AV/CS/HD-MI)**

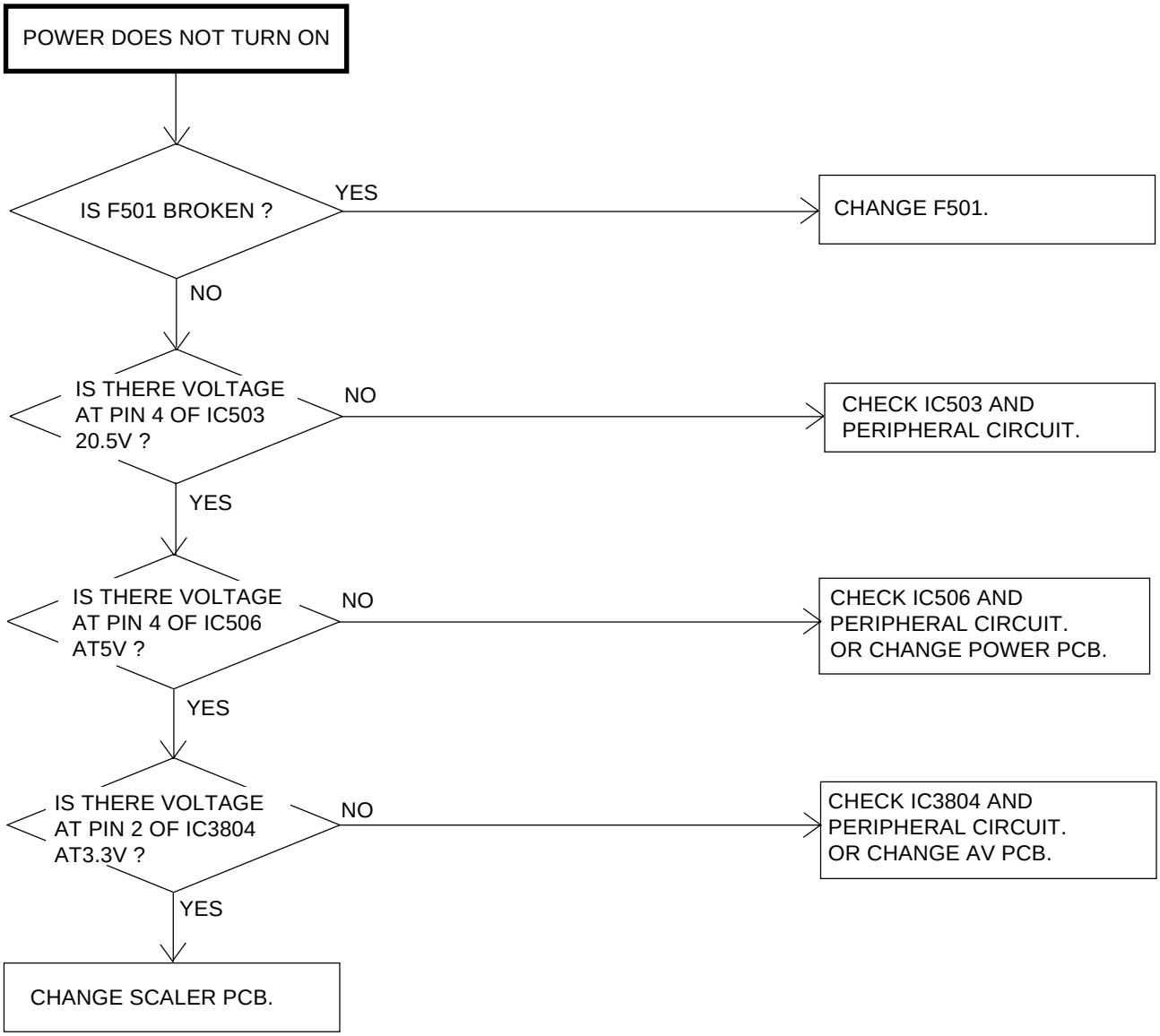
						CS				HD-MI				
		TV	TV 720p	AV	AV (S)	480i	480p	720p	1080i	480i	480p	720p	1080i	VGA
NO.	FUNCTION	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.
1	H POSI OSD	346	346	346	346	346	346	346	346	346	346	346	346	346
2	V POSI OSD	85	85	85	85	85	85	85	85	85	85	85	85	85
5	G DRIVE (N)	128	128	128	128	128	128	128	128	128	128	128	128	128
6	G CUTOFF (N)	128	128	128	128	128	128	128	128	128	128	128	128	128
11	G DRIVE (C)	128	128	128	128	128	128	128	128	128	128	128	128	128
12	G CUTOFF (C)	128	128	128	128	128	128	128	128	128	128	128	128	128
17	G DRIVE (W)	128	128	128	128	128	128	128	128	128	128	128	128	128
18	G CUTOFF (W)	128	128	128	128	128	128	128	128	128	128	128	128	128
22	H POSI 60Hz	284	326	284	284	284	138	328	132	272	138	290	238	158
24	V POSI 60Hz	34	59	34	34	34	34	56	42	36	35	62	42	35
25	BAK LIGHT CENT	128	128	128	128	128	128	128	128	128	128	128	128	128
26	BAK LIGHT MAX	255	255	255	255	255	255	255	255	255	255	255	255	255
27	BAK LIGHT MIN	00	00	00	00	00	00	00	00	00	00	00	00	00
28	BRIGHT CENT	126	126	126	126	126	126	126	126	126	126	126	126	126
29	BRIGHT MAX	156	156	156	156	156	156	156	156	156	156	156	156	156
30	BRIGHT MIN	70	70	70	70	70	70	70	70	70	70	70	70	70
31	TINT	128	128	114	120	128	128	128	128	132	132	132	132	132
35	CONTRAST CENTER	---	---	---	---	---	---	---	---	119	119	119	116	119
36	CONTRAST MAX	---	---	---	---	---	---	---	---	164	164	164	164	164
37	CONTRAST MIN	---	---	---	---	---	---	---	---	50	50	50	50	50
38	COLOR CENT	70	110	88	80	83	104	440	440	73	73	73	73	73
39	COLOR MAX	127	127	127	127	127	127	127	127	127	127	127	127	127
40	COLOR MIN	00	00	00	00	00	00	00	00	00	00	00	00	00
63	CONTRAST 40	---	---	---	---	---	---	---	---	156	156	156	156	156
64	BRIGHT (3F54)	121	128	123	122	122	128	128	128	118	117	118	118	113
65	CONTRAST (3F54)	---	---	---	---	---	170	170	170	113	113	113	113	118
66	SRC TOP	21	21	21	21	21	21	21	21	21	21	21	21	21
67	SRC TOP	21	28	21	21	21	45	29	27	21	44	28	28	43

ELECTRICAL ADJUSTMENTS

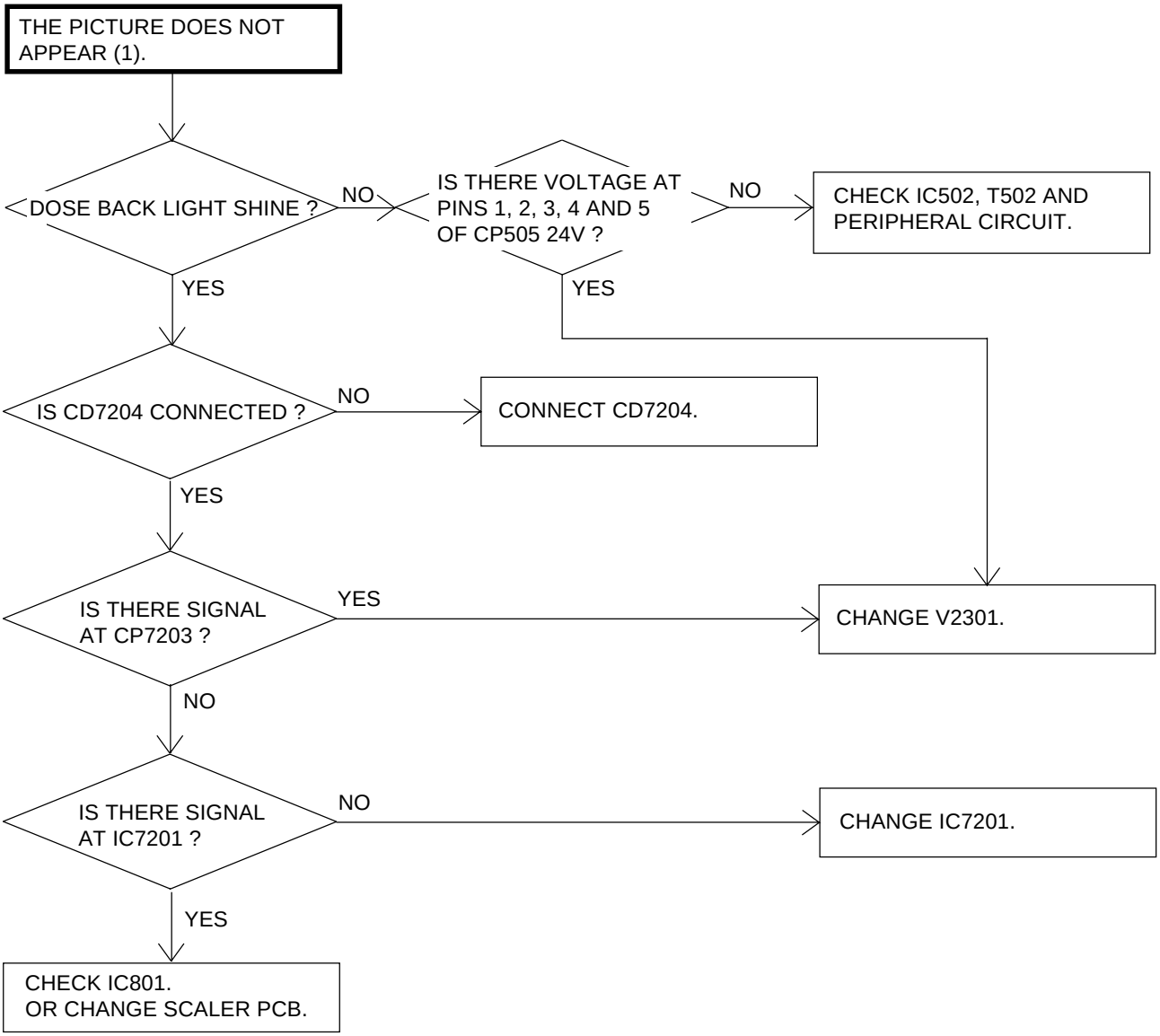
3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



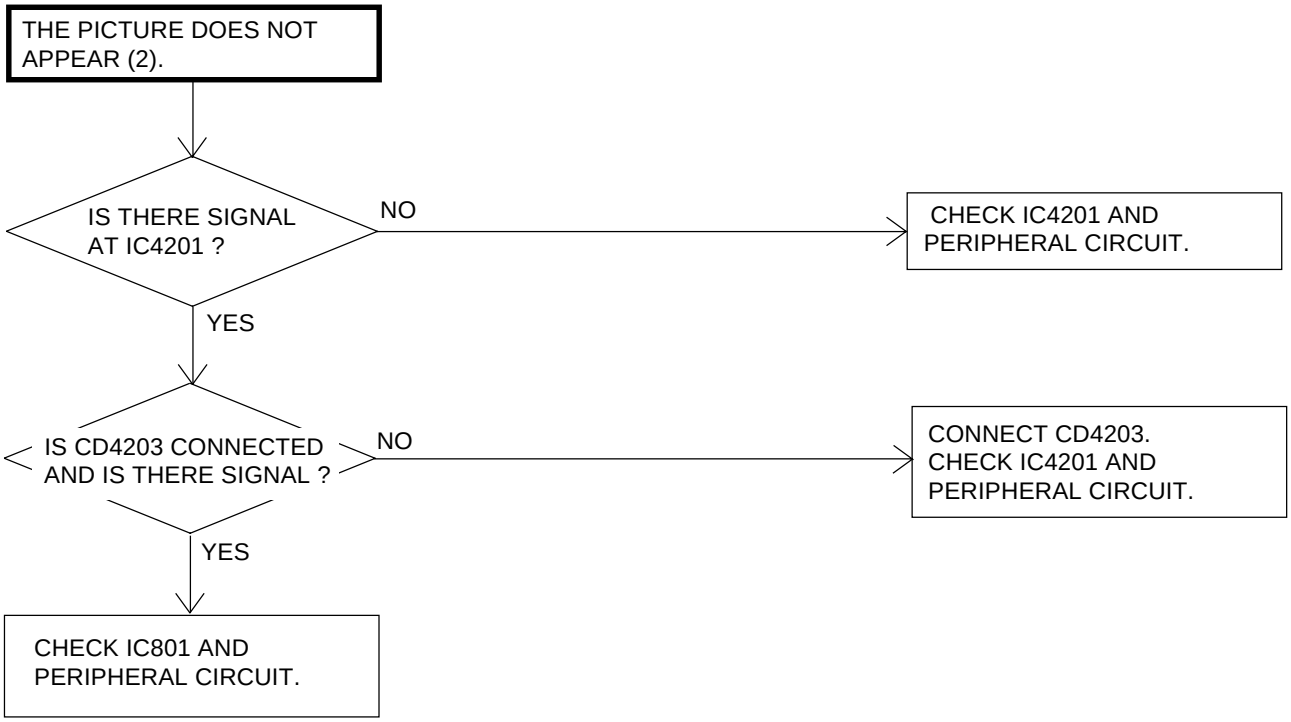
TROUBLESHOOTING GUIDE



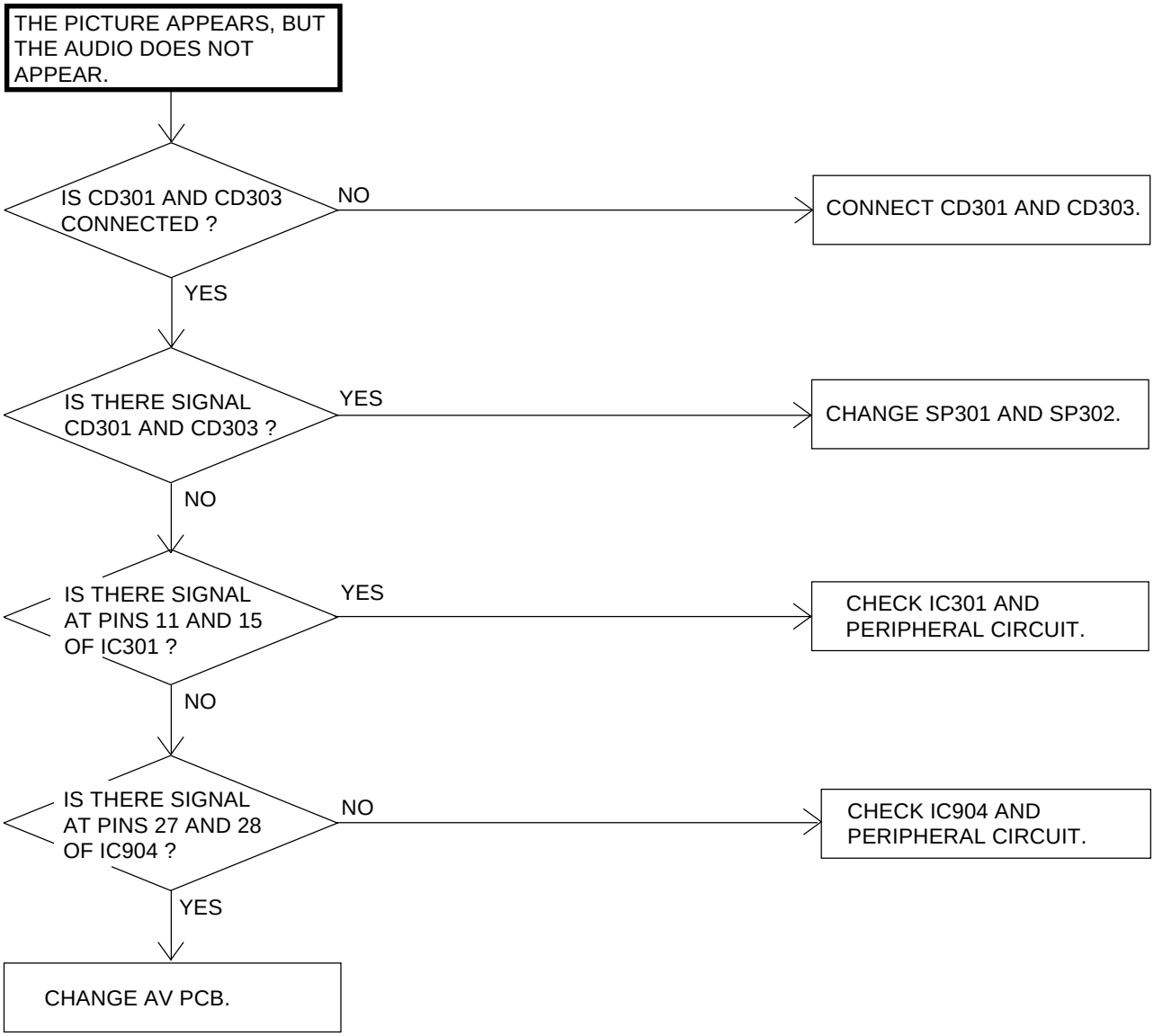
TROUBLESHOOTING GUIDE



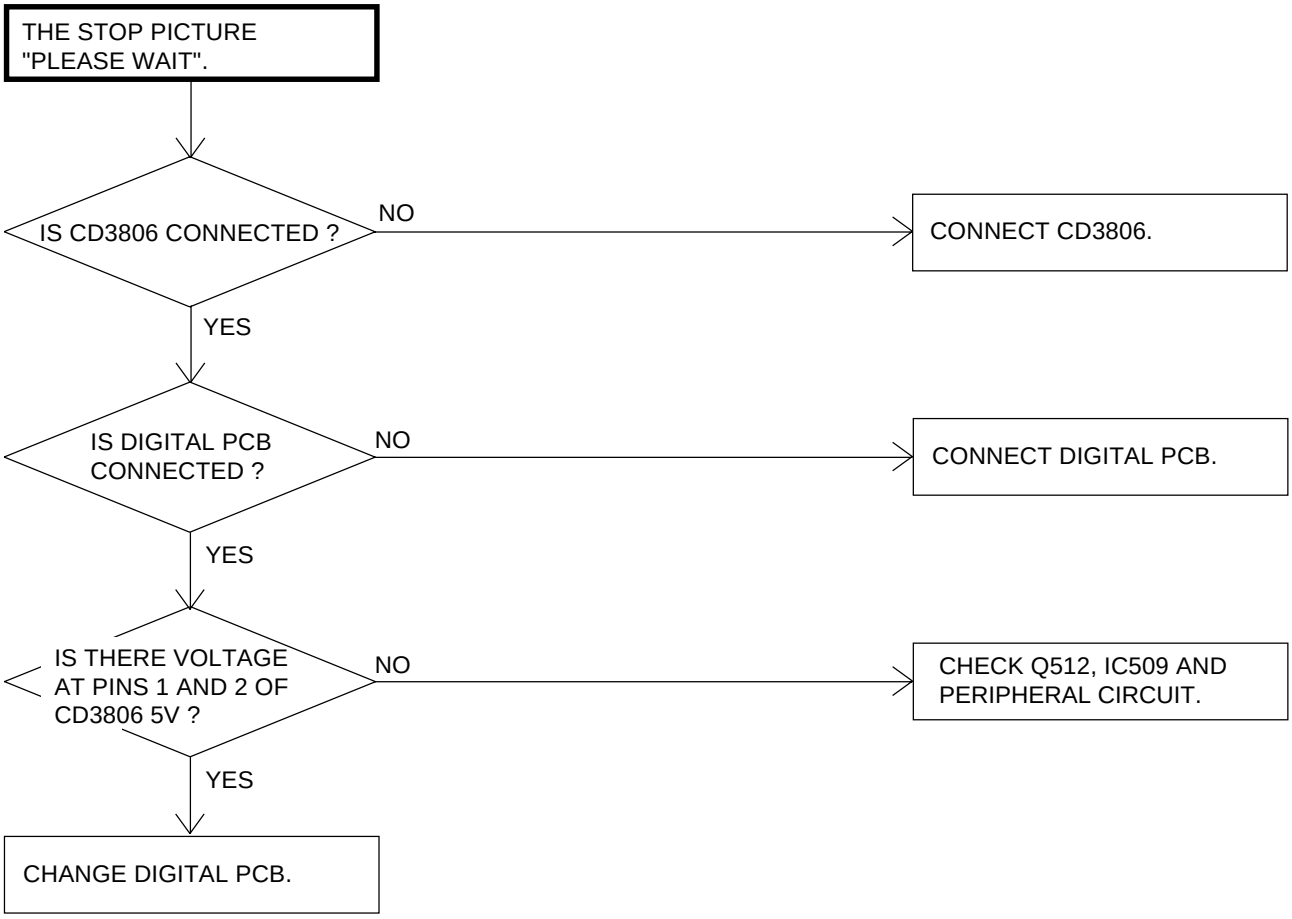
TROUBLESHOOTING GUIDE



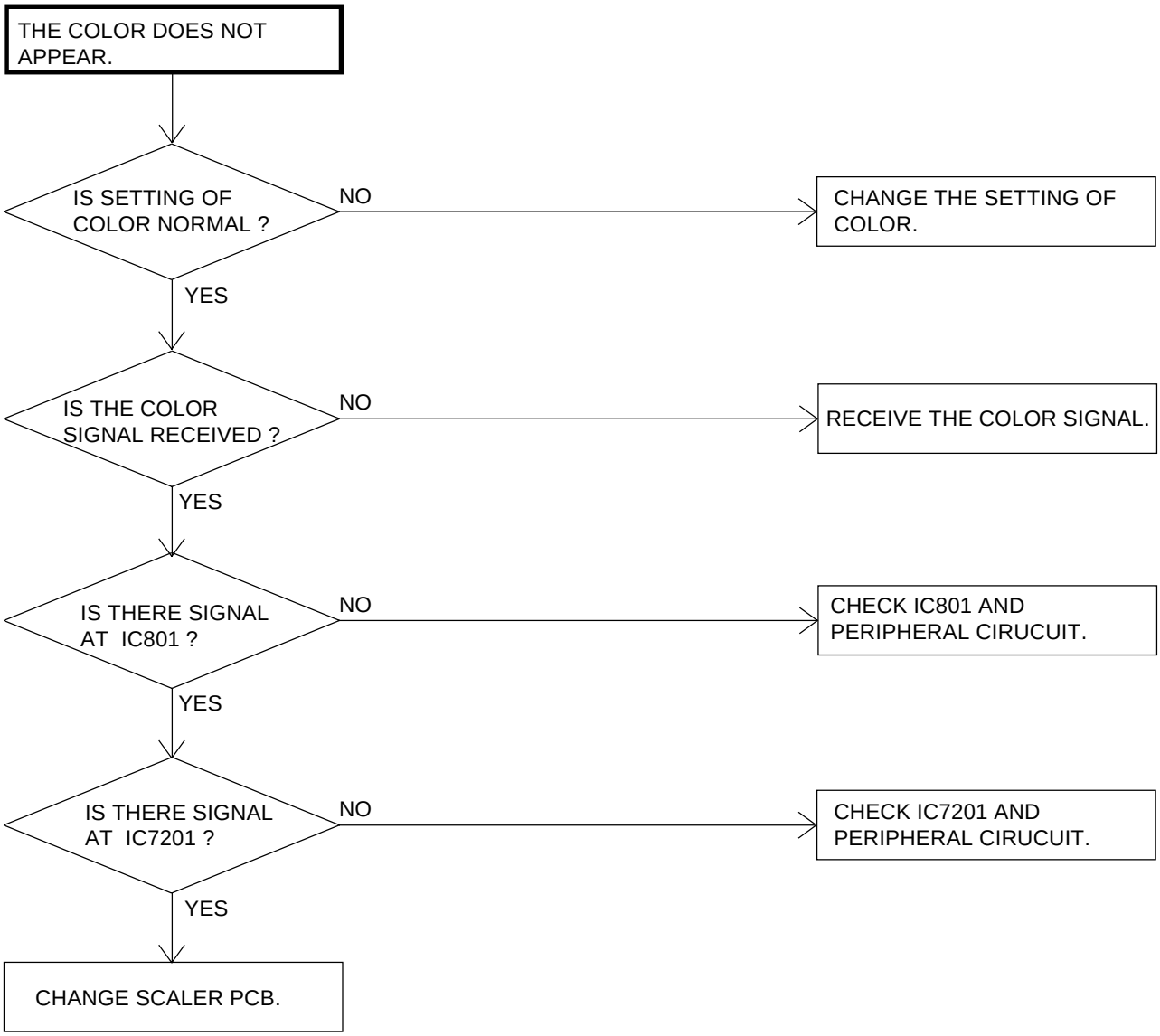
TROUBLESHOOTING GUIDE



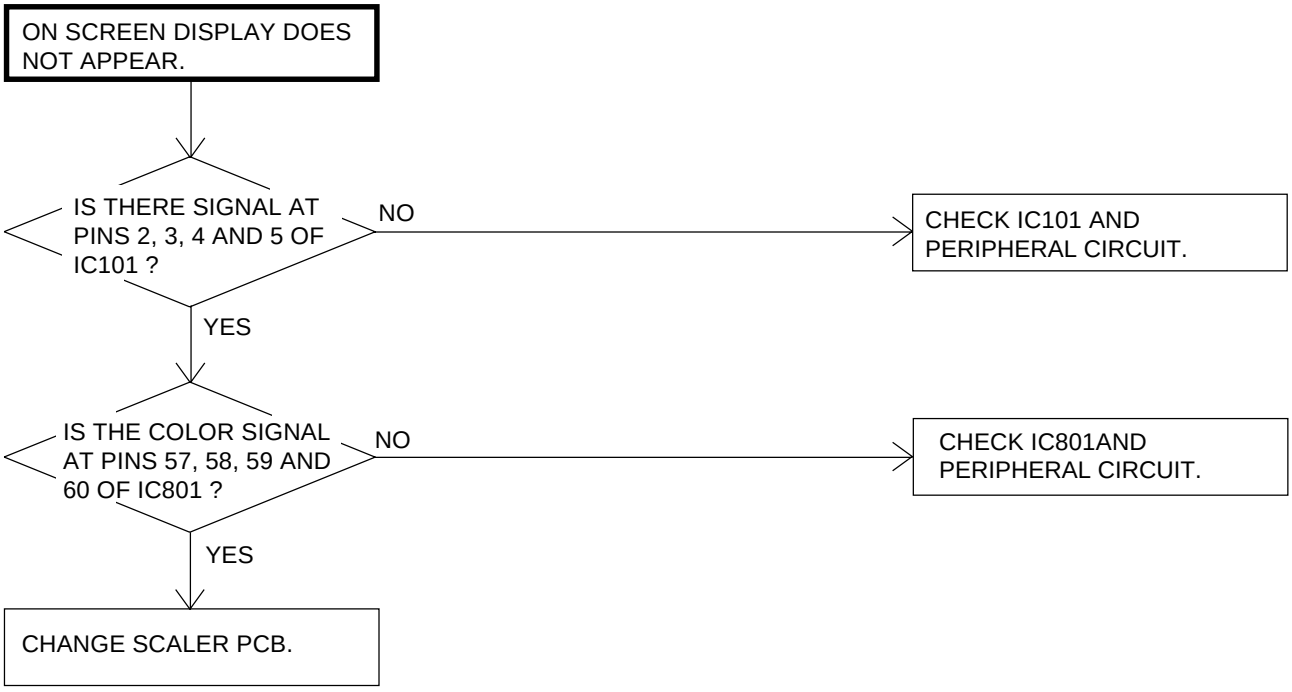
TROUBLESHOOTING GUIDE



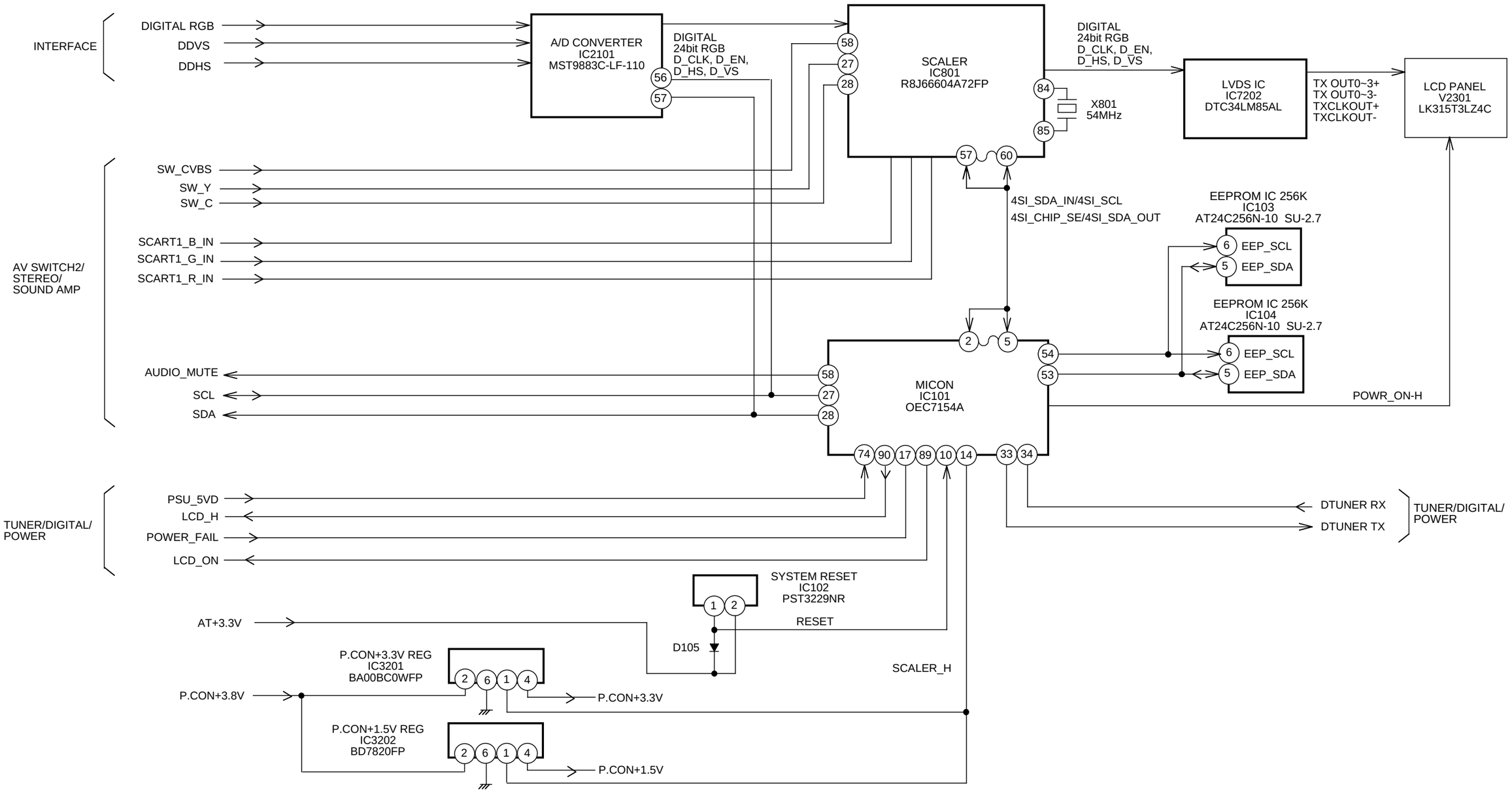
TROUBLESHOOTING GUIDE



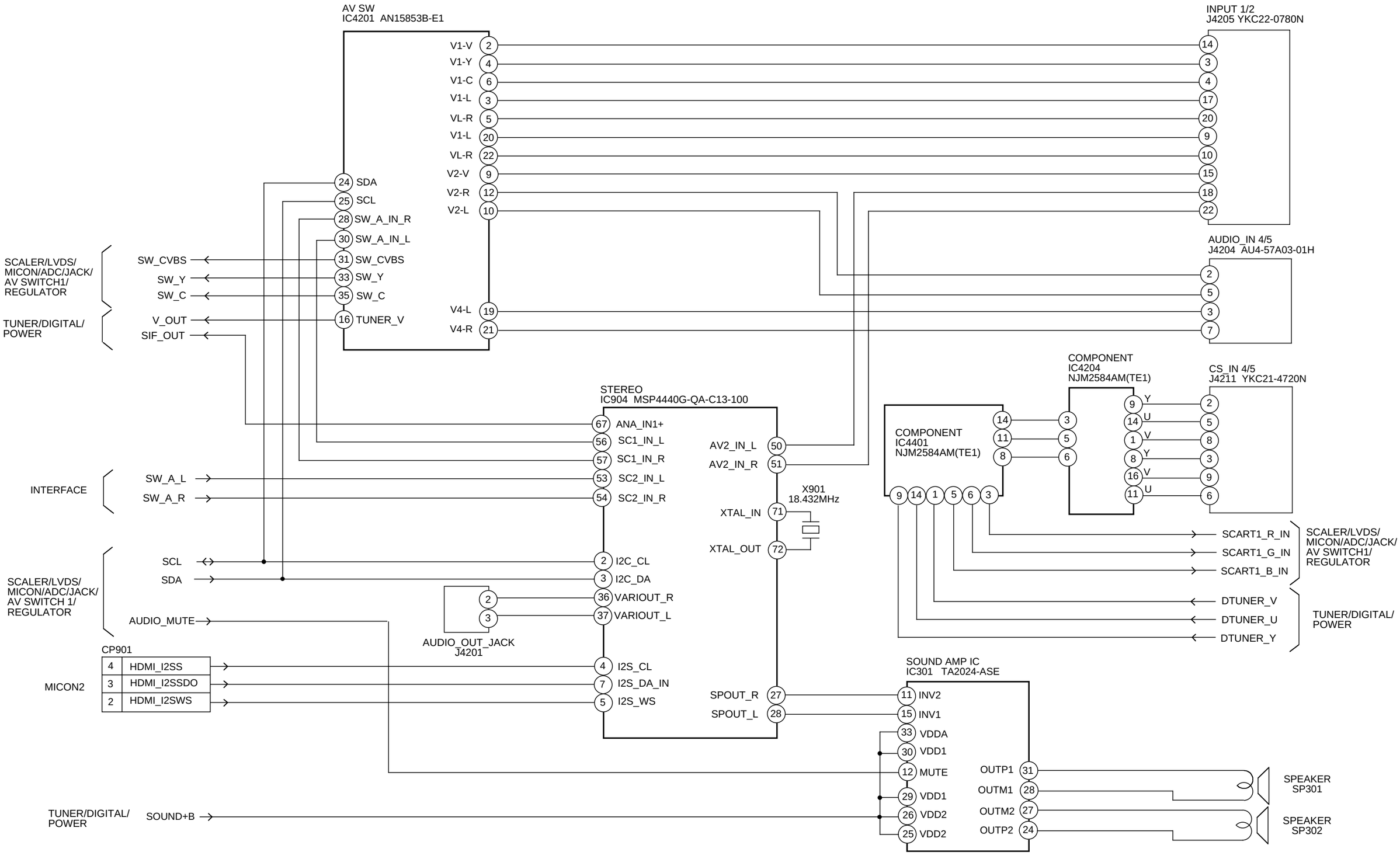
TROUBLESHOOTING GUIDE



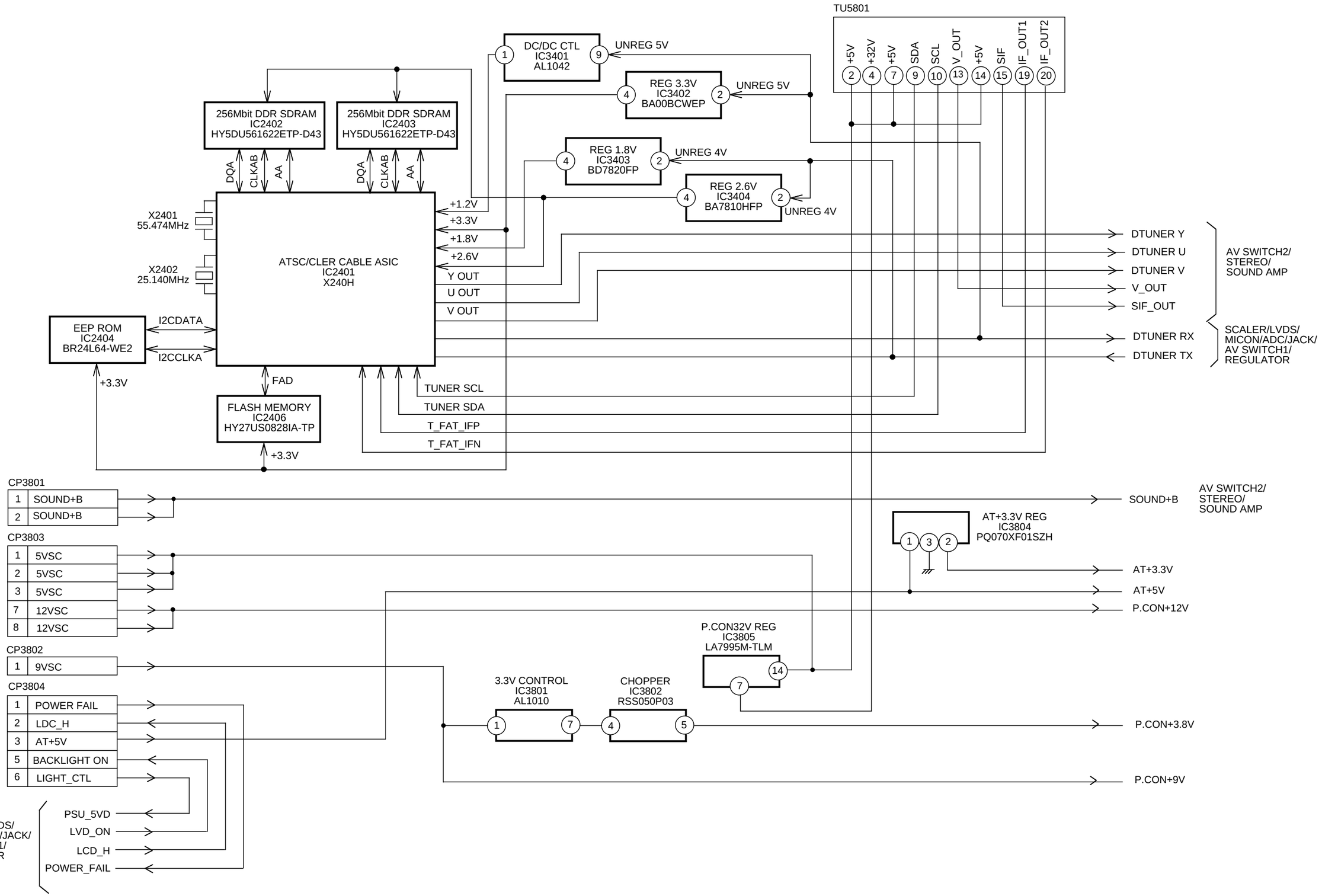
SCALER/LVDS/MICON/ADC/JACK/AV SWITCH1/REGULATOR BLOCK DIAGRAM



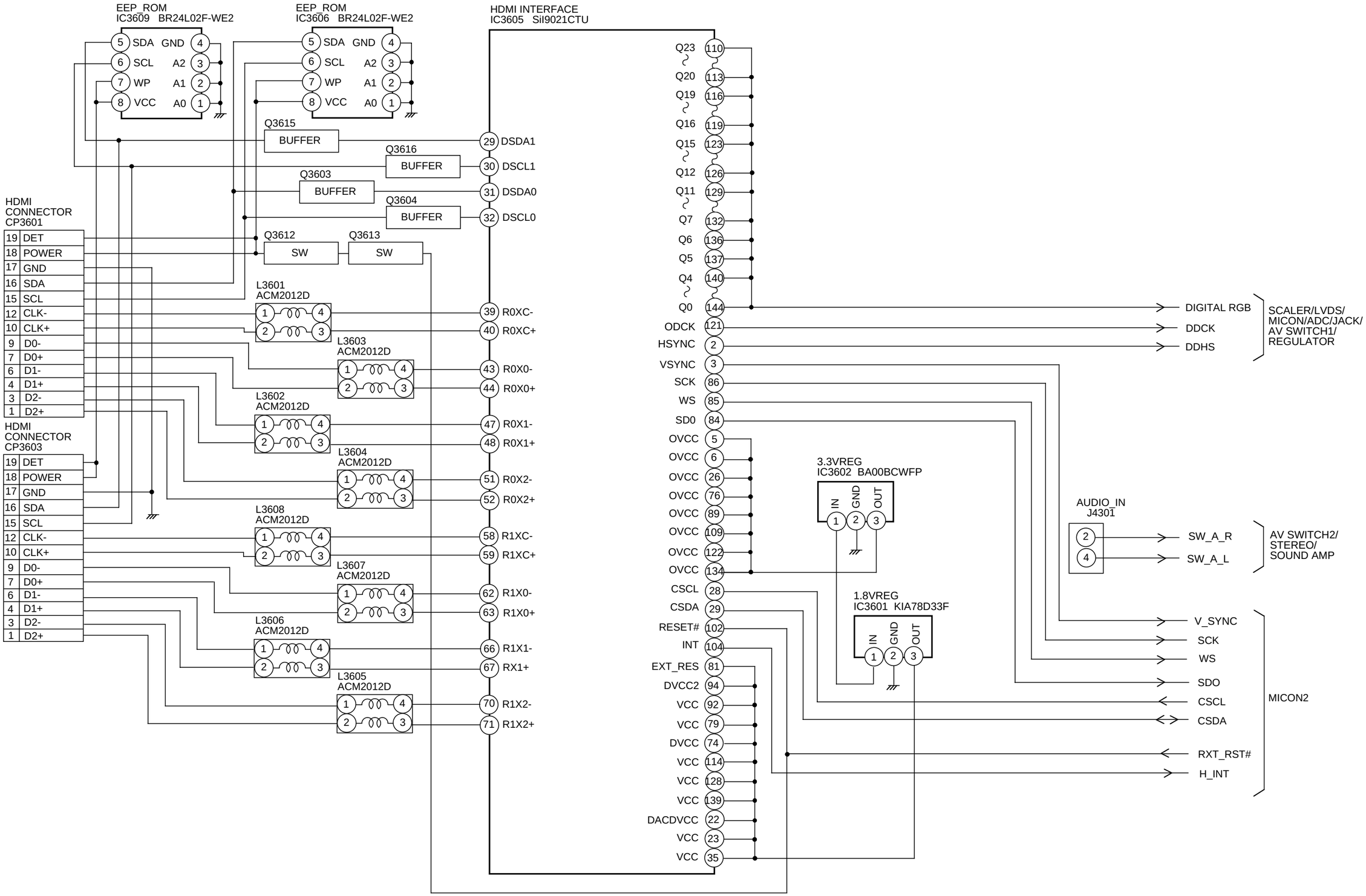
AV SWITCH2/STEREO/SOUND AMP BLOCK DIAGRAM



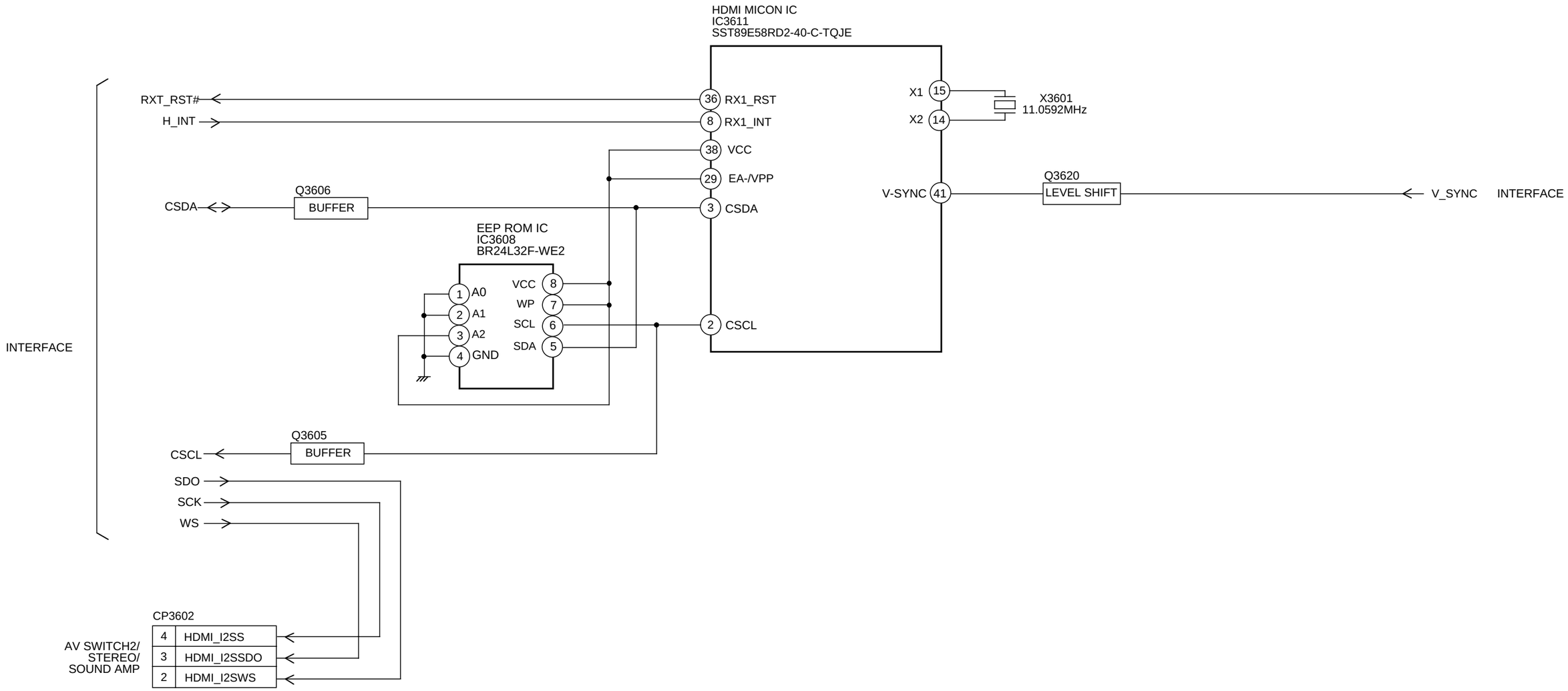
TUNER/DIGITAL/POWER BLOCK DIAGRAM



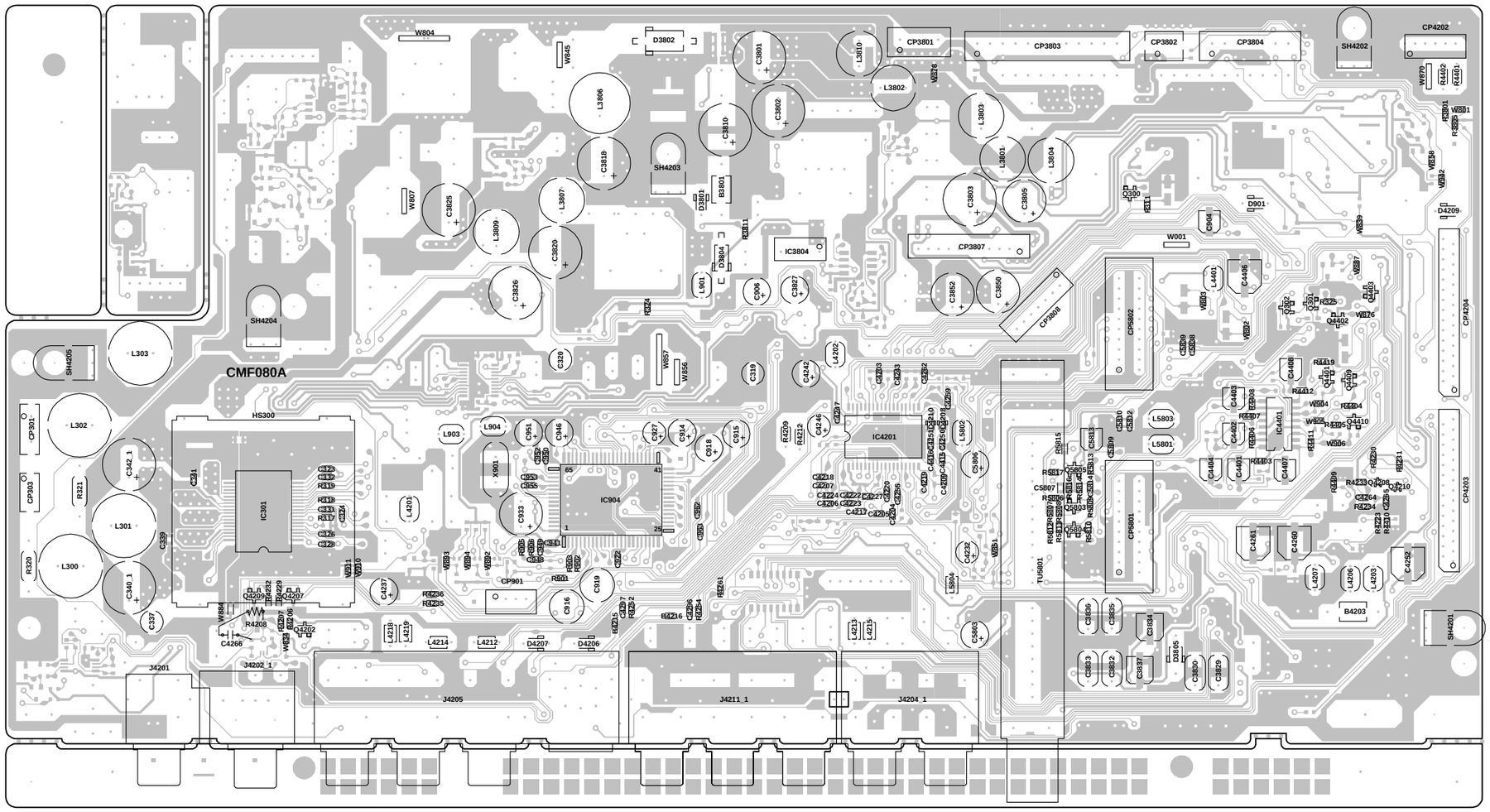
INTERFACE BLOCK DIAGRAM



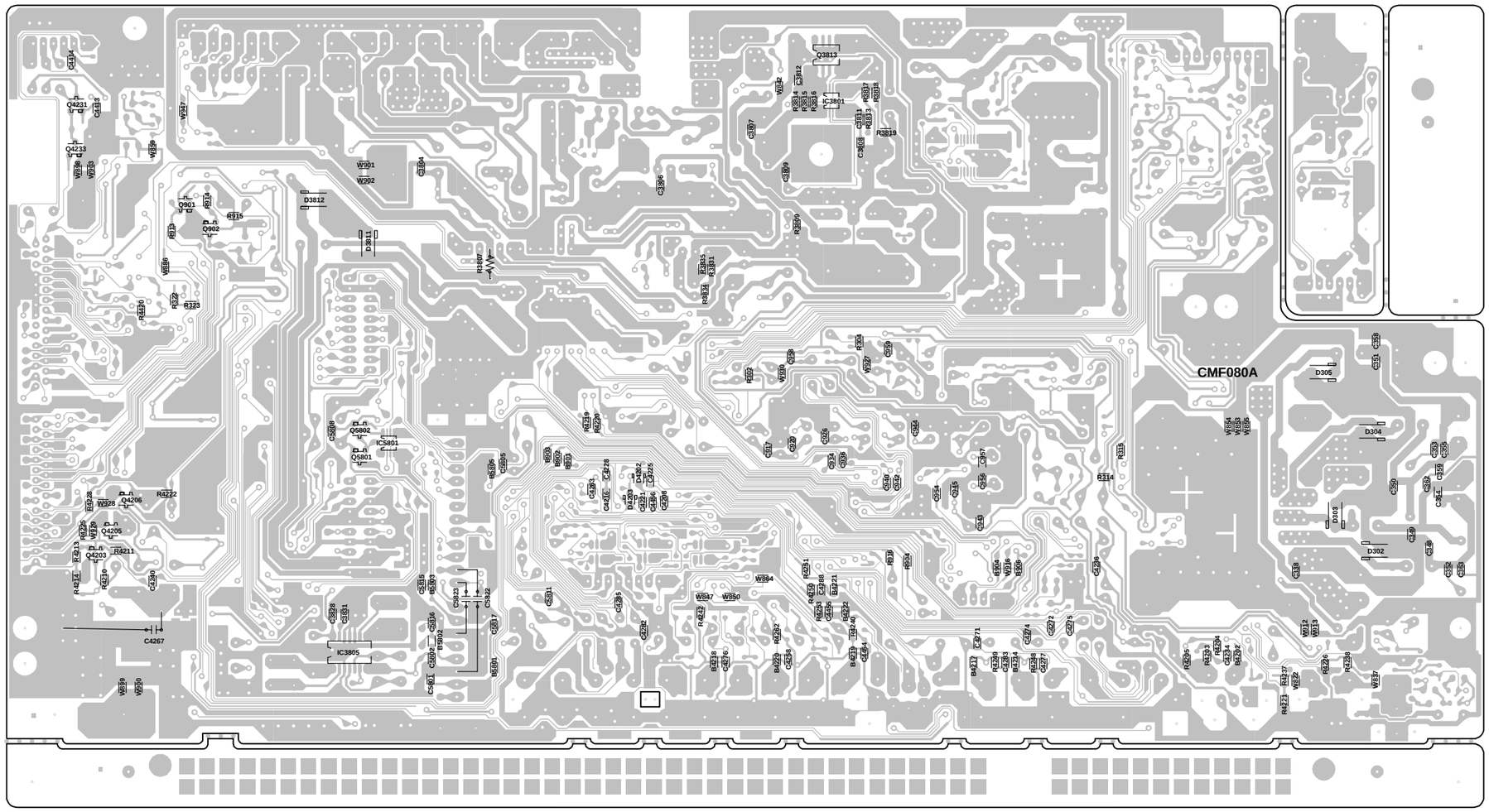
MICON2 BLOCK DIAGRAM



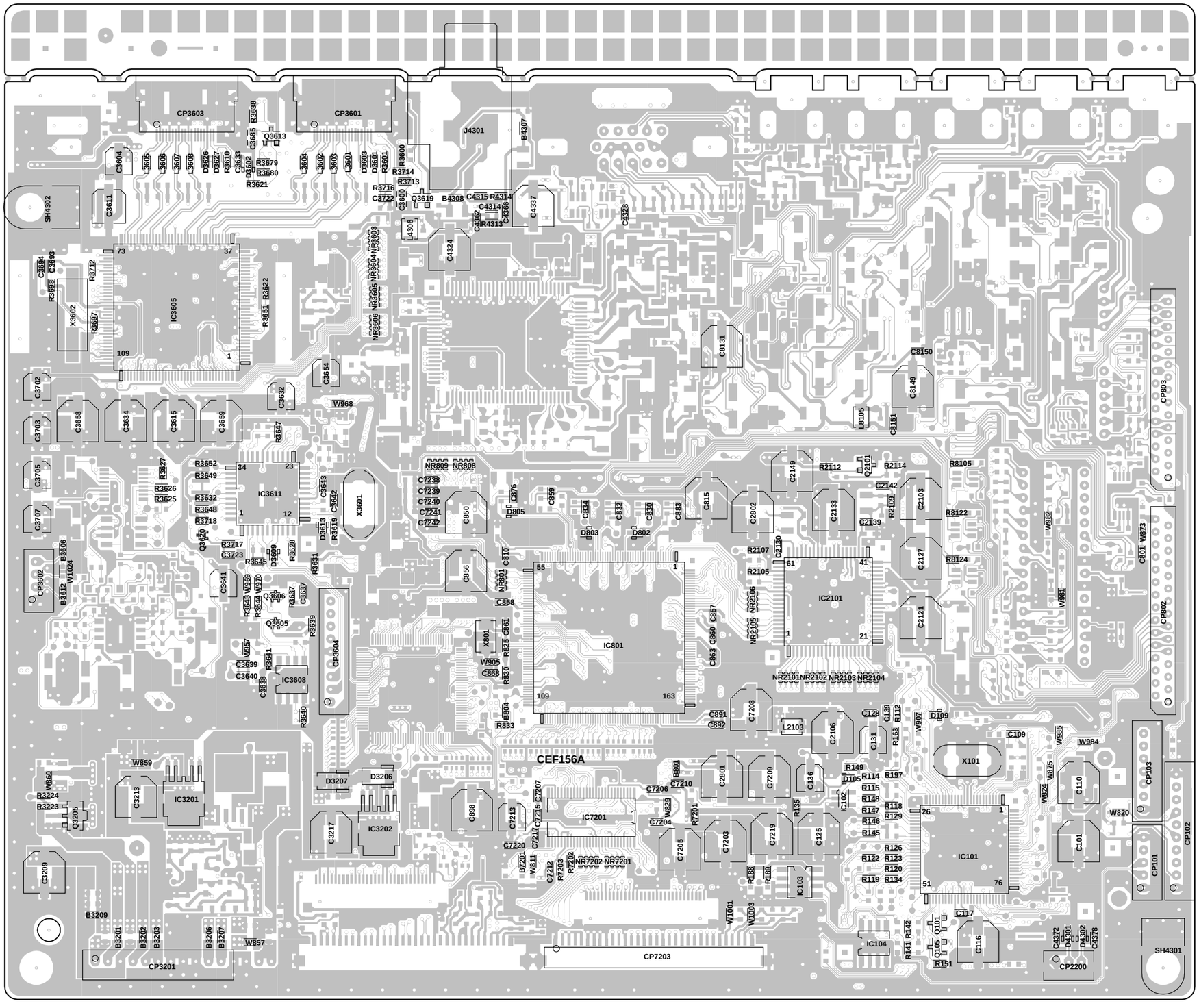
PRINTED CIRCUIT BOARDS
AV (TOP SIDE)



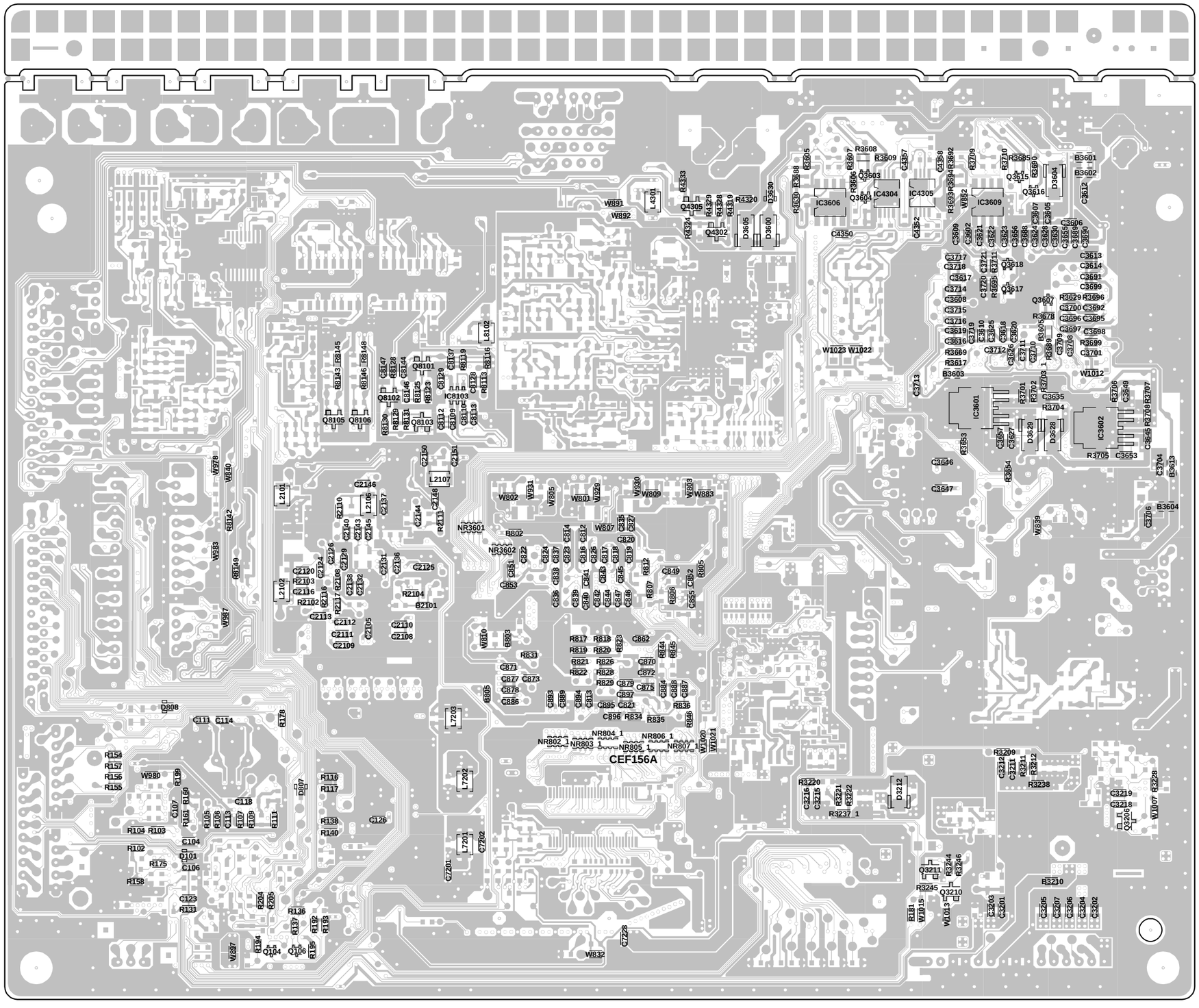
PRINTED CIRCUIT BOARDS
AV (BOTTOM SIDE)



PRINTED CIRCUIT BOARDS
SCALER (TOP SIDE)

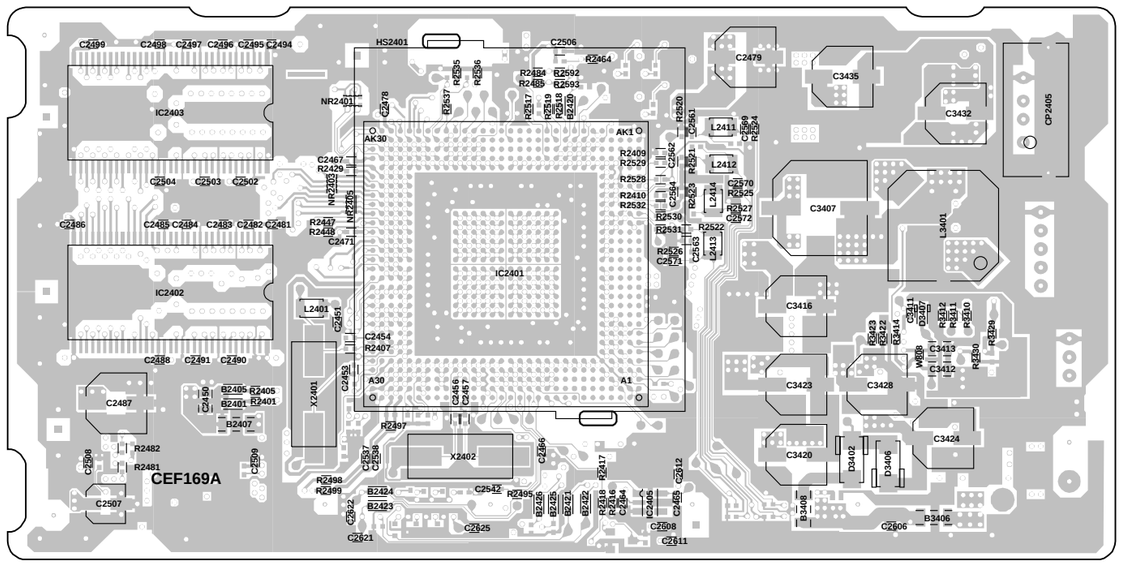


PRINTED CIRCUIT BOARDS
SCALER (BOTTOM SIDE)

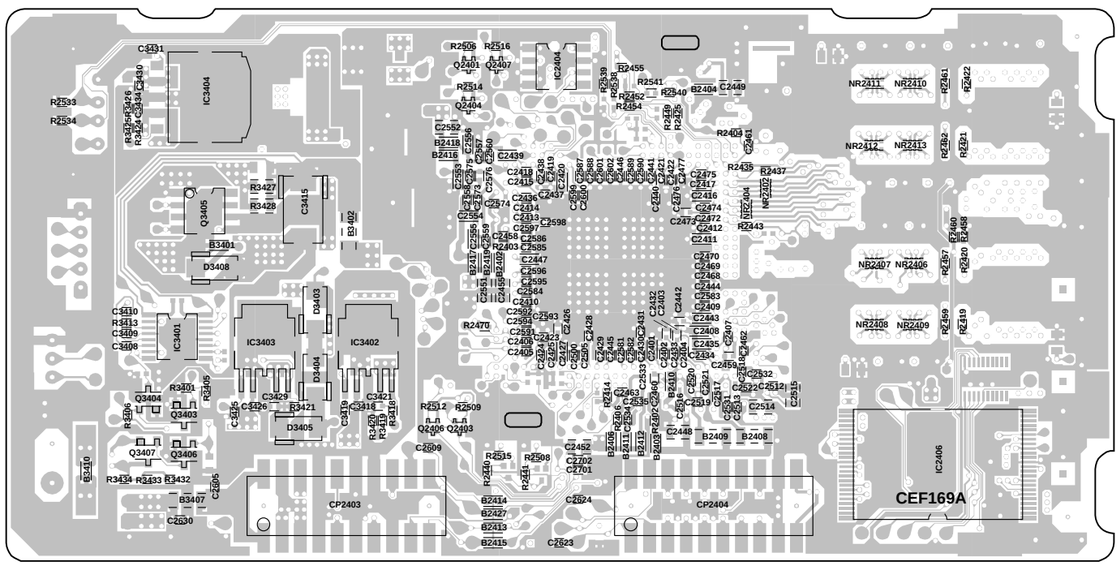


PRINTED CIRCUIT BOARDS

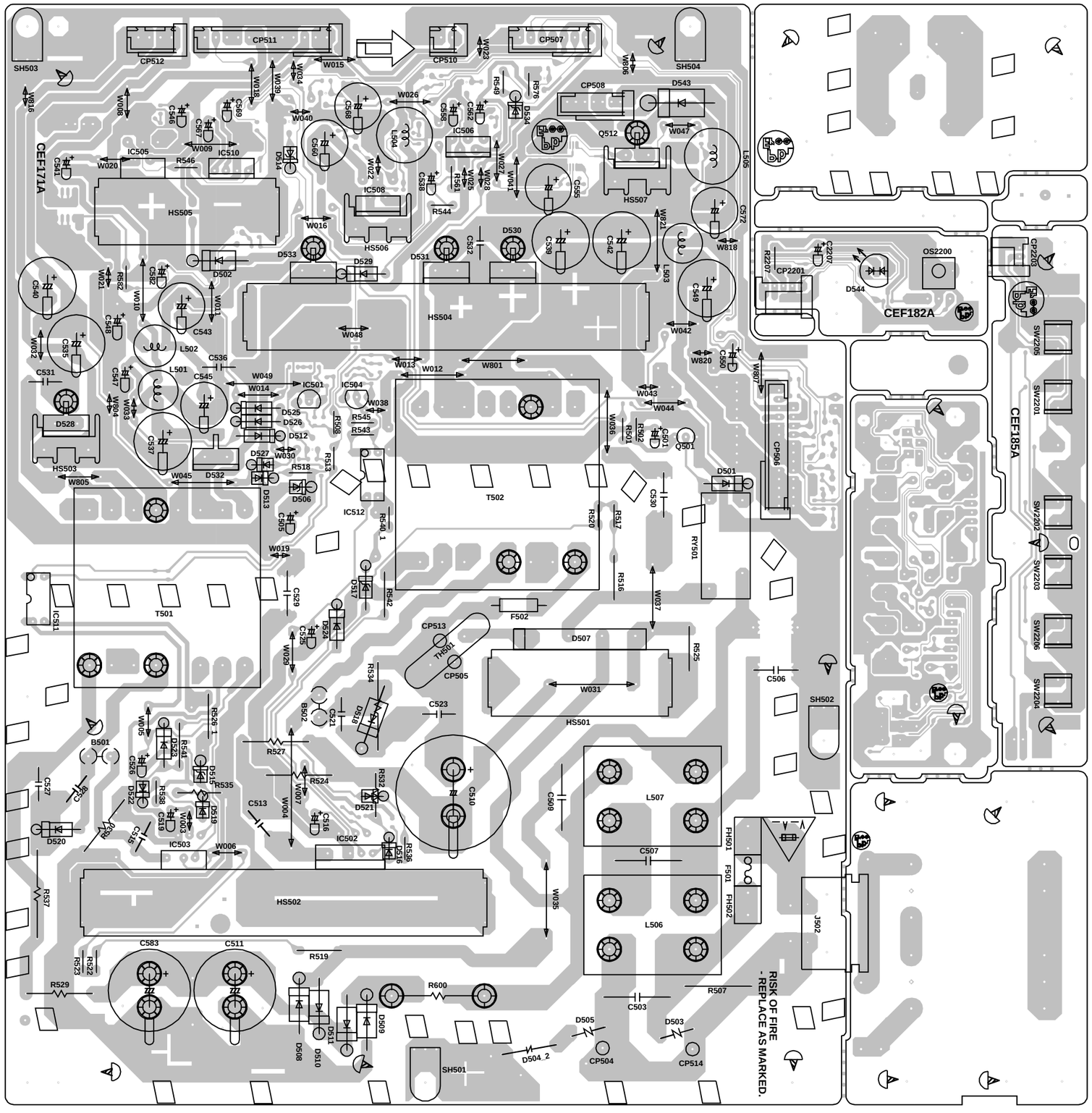
DIGITAL (TOP SIDE)



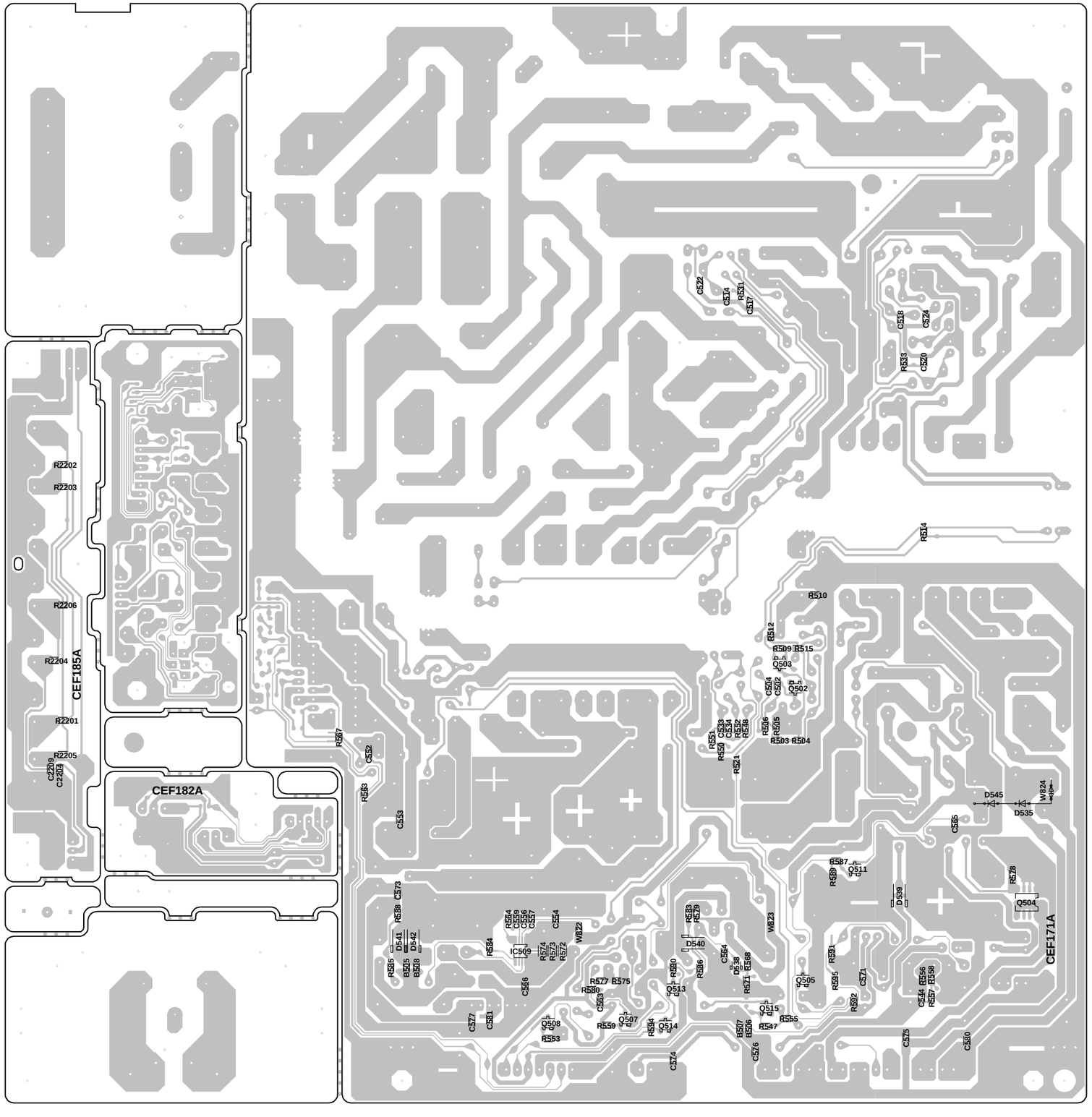
DIGITAL (BOTTOM SIDE)



PRINTED CIRCUIT BOARDS
POWER/REMOCON/OPERATION (INSERTED PARTS)
SOLDER SIDE



PRINTED CIRCUIT BOARDS
POWER/OPERATION (CHIP MOUNTED PARTS)
SOLDER SIDE



AV SWITCH2 SCHEMATIC DIAGRAM

(AV PCB)

FROM/TO POWER

AT+3.3V
AT+5V
P.CON+9V
GND
P.CON+5V

FROM/TO TUNER

YUV1/YUV2_Y
DTUNER_PR
DTUNER_Y
DTUNER_PB
DTUNER_PR

FROM/TO AV JACK

YUV1/YUV2_PR
DTUNER_PB
DTUNER_H
YUV1/YUV2_Y
YUV1/YUV2_PB
YUV1/YUV2_PR
YUV1_A_IN_L
YUV1_A_IN_R
YUV2_A_IN_L
YUV2_A_IN_R
S_SW_1
S_SW_2
S1_Y_IN
S1_C_IN
S2_Y_IN
S2_C_IN
AV1_IN
AV2_IN
AV1_A_IN_L
AV1_A_IN_R
DTUNER_Y
SCL
SDA
S2_C_IN
S2_Y_IN
S_SW_2
YUV2_A_IN_L
YUV2_A_IN_R
TUNER_VIDEO

FROM/TO TUNER/OUT JACK

REMOCON_IN
STANDBY_LED

FROM/TO OPERATION/REMOCON

STANDBY_LED
REMOCON_IN

CP4202(CP2201)
A2001WV2-5P

5	P.ON LED
4	STANDBY LED
3	AT+5V
2	GND
1	REMOCON IN

COMPONENT1/2 YUV SW
IC4401 NJM2584AM(TE1)

IN1A IN1B GND1 NC IN2B OUT1 V+ GND2 CTL OUT2 IN2A OUT3 GND3 NC IN3B IN3A

AV SW IC
IC4201 AN15853B-E1

Vref 6dB BIAS Vcc SW_A_R SW_A_L SW_CVBS SW_Y SW_C D_L1_Vin D_SW_1 NC

BUFFER Q4401 2SA1530A
BUFFER Q4409 2SA1530A
BUFFER Q4410 2SA1530A
BUFFER Q4205 2SC3052
BUFFER Q4206 2SC3052
BUFFER Q4203 2SC3052

LEVEL SHIFT Q4208 KTK5132E
LEVEL SHIFT Q4210 KTK5132E
SW Q4231 RT1P241C
SW Q4233 RT1N141C

D4202 UDZS8.2B
D4203 UDZS8.2B
D4208 UDZS8.2B
D4210 UDZS8.2B
D4209 1SS133

W906 W905 W904 W803 W802 W870 W928 W929

L4202 47uH 0305
L4207 0305 47uH
L4206 0305 47uH
L4203 47uH 0305
L4401 220uH 0305

B4203 W5RH3.5X5X1.0

FROM/TO TUNER/OUT JACK

SW_YUV_PR
SW_YUV_PB
SW_YUV_Y

FROM/TO TUNER

DTUNER_RESET
DTUNER_TX
AUDIO_MUTE_L
DTUNER_POWER
DTUNER_SD_H
DTUNER_RX
TUNER_VIDEO

FROM/TO STEREO

SCL
SDA
SW_AUDIO_R[JACK]
SW_AUDIO_L[JACK]
STEREO_RESET
SW_AUDIO_L[PC]
SW_AUDIO_R[PC]

FROM/TO SCALER

DTUNER_H	NC	———	29
AUDIO_MUTE_L	DTUNER_H		28
NC	DTV_MUTE_L		27
DTUNER_RX	NC	———	26
DTUNER_TX	DTUNER_RX		25
DTUNER_RESET	GND		24
SW_AUDIO_R[PC]	DTUNER_TX		23
SW_AUDIO_L[PC]	GND		22
STEREO_RESET	DTUNER_RESET		21
NC	GND		20
NC	SW_AUDIO_R[PC]		19
DTUNER_POWER	GND		18
DTUNER_SD_H	SW_AUDIO_L[PC]		17
SDA	NC	———	16
SCL	STEREO_RESET		15
GND	NC	———	14
SWITCH_CVBS	SCART_AUDIO_SW		13
GND	SDA1		12
SWITCH_VIDEO_Y	SCL1		11
GND	GND		10
SWITCH_VIDEO_C	DTUNER_POWER		9
	GND		8
	DTUNER_SD_H		7
	GND		6
	SWITCH_CVBS		5
	GND		4
	SWITCH_VIDEO_Y		3
	GND		2
	SWITCH_VIDEO_C		1

CD4203 2H0T1801
00_6232_029_006_800+ (CP803) CP4203

CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

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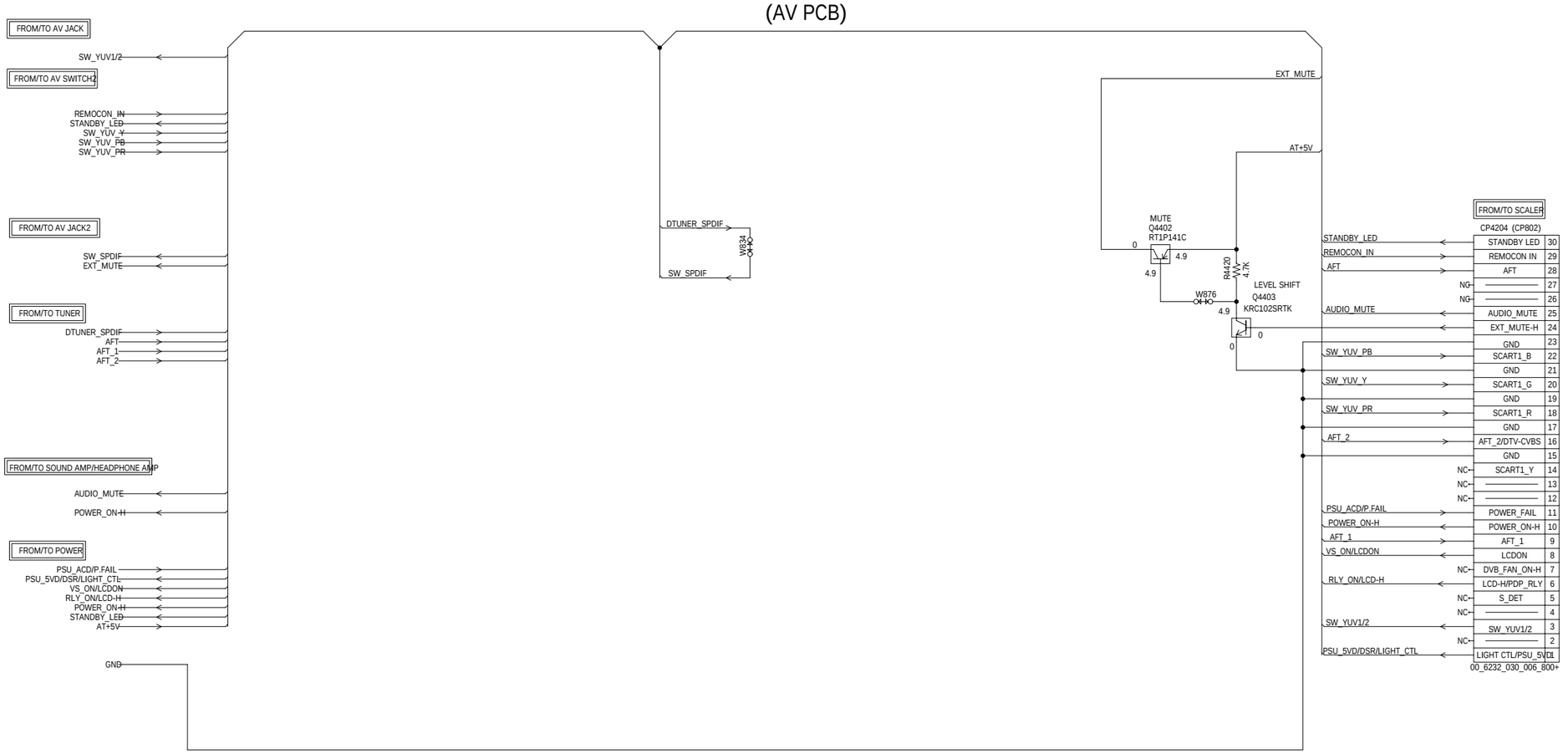
PCBD20 CMF080

TUNER/OUT JACK SCHEMATIC DIAGRAM

(AV PCB)



PCBD20
CMF080

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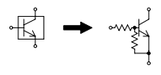

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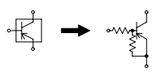
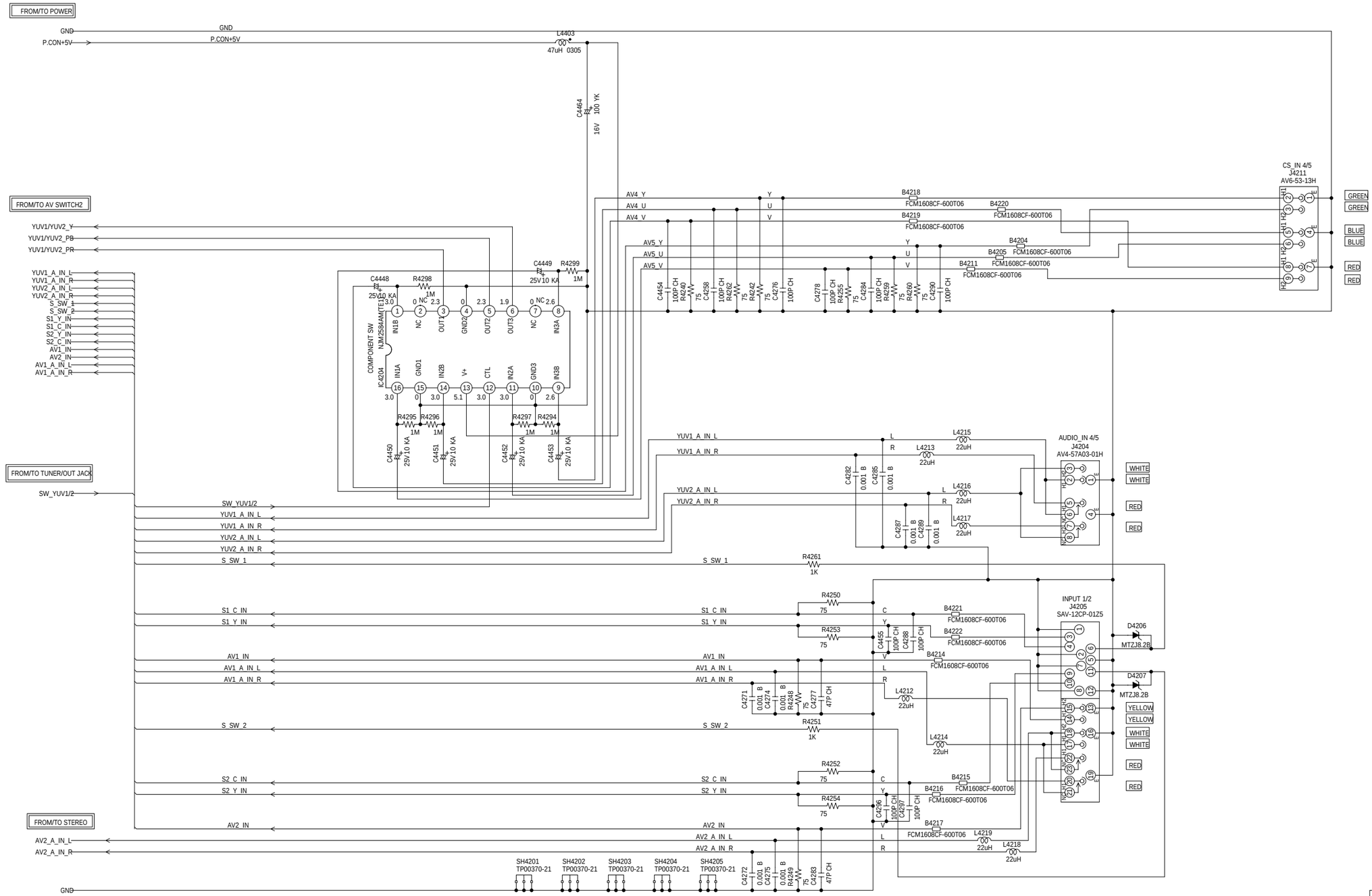


AV JACK SCHEMATIC DIAGRAM

(AV PCB)



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STEREO SCHEMATIC DIAGRAM

(AV PCB)

FROM/TO POWER

AT+5V

P.CON+5V

GND

P.CON+8V

W839

R914 10K

R915 10K

C906 10V220 YK

R913 1K

BUFFER Q901 2SC3052

BUFFER Q902 2SC3052

L901 10uH 0305

B901 BLM18PG121SN1D

B902 FCM1608CF-600T06

B903 BLM18PG121SN1D

FROM/TO TUNER

I2SSD0_OUTA

I2SWS_OUTA

I2SSCLK_OUTA

I2SSD0_IN

I2SWS_IN

I2SSCLK_IN

R906 100

R905 100

L903 10uH 0305

C933 6.3V 1000 YK

C941 0.0015 B

C943 470P CH

C945 220P CH

C948 22P CH

C949 22P CH

C922 0.1 B

D901 MTZJ5.6B

C904 16V 22V-S

R901 33

R902 33

R903 33

FROM/TO HDMI MICON2

CP901(CP3602) A2001WV2-4P

W892 W893 W894 W916

B904 FCM1608KF-102T02

B906 FCM1608KF-102T02

HDMI_I2SSCK

HDMI_I2SSDO

HDMI_I2SWS

GND

CD901 CU248101

TR303 W5T29X7.5X19

TR305 W5T29X7.5X19

FROM/TO SOUND AMP/HEADPHONE AMP

W927

SP_AUDIO_OUT_L

SP_AUDIO_OUT_R

C959 0.0022 B

W857

W856

W930

C958 0.0022 B

L904 10uH 0305

STEREO IC904 MSP4440G-QA-C13-100

25 NC

26 VREF2

80 STANDBYQ

79 ADR_SEL

SPOUT_R

SPOUT_L

NC

DACM_SUB

SC2_OUT_R

SC2_OUT_L

VREF1

VariOut_R

VariOut_L

CAPL_A

AHVSUP

I2S_DA_IN3

RESETQ

I2S_WS3

I2S_CL3

I2S_DA_IN2

DVSS

DVSUP

ADR_CL

ADR_WS

ADR_DA

I2S_DA_IN1

I2S_DA_OUT

I2S_WS

I2S_CL

I2C_DA

I2C_CL

D_CTR_I/O_2

D_CTR_I/O_1

AUDIO_CL_OUT

TP

X901 18.432MHz

C956 10P CH

C957 5P CH

XTAL_OUT

XTAL_IN

TESTEN

ANA_IN2+

ANA_IN-

C955 56P CH

C953 56P CH

C954 56P CH

SIF

AVSUP

FROM/TO TUNER

SIF

FROM/TO AV JACK2

AUDIO_JACK_OUT_R

AUDIO_JACK_OUT_L

C916 16V22 KANP

C919 16V22 KANP

R904 100

R916 100

C915 50V10 YK

C914 50V10 YK

40 CAPL_M

65 AVSUP

NC

AHVSS

AGNDC

SW1_A_IN_L (DVD)

SW_A_IN_R

ASG4

AV2_A_IN_L (AV2)

AV2_A_IN_R

ASG2

SW2_A_IN_L (PC/HDMI/DVI)

SW2_A_IN_R

ASG1

SW_A_IN_L (AV1/YUV/SIDE)

SW_A_IN_R

VREFTOP

MONO_IN

AVSS

C917 470P CH

C920 0.0015 B

C918 50V10 YK

C926 0.1 B

C927 50V 3.3 KA

C962 0.33 B

C963 0.33 B

C934 0.33 B

C936 0.33 B

C940 0.33 B

C942 0.33 B

C944 0.1 B

C946 50V 10 YK

C952 470P CH

C950 0.0015 B

C951 50V 10 YK

FROM/TO AV SWITCH2

STEREO_RESET

SCL

SDA

SW_AUDIO_L[PC]

SW_AUDIO_R[PC]

SW_AUDIO_L[JACK]

SW_AUDIO_R[JACK]

FROM/TO AV JACK

AV2_A_IN_L

AV2_A_IN_R

GND

PCBD20 CMF080

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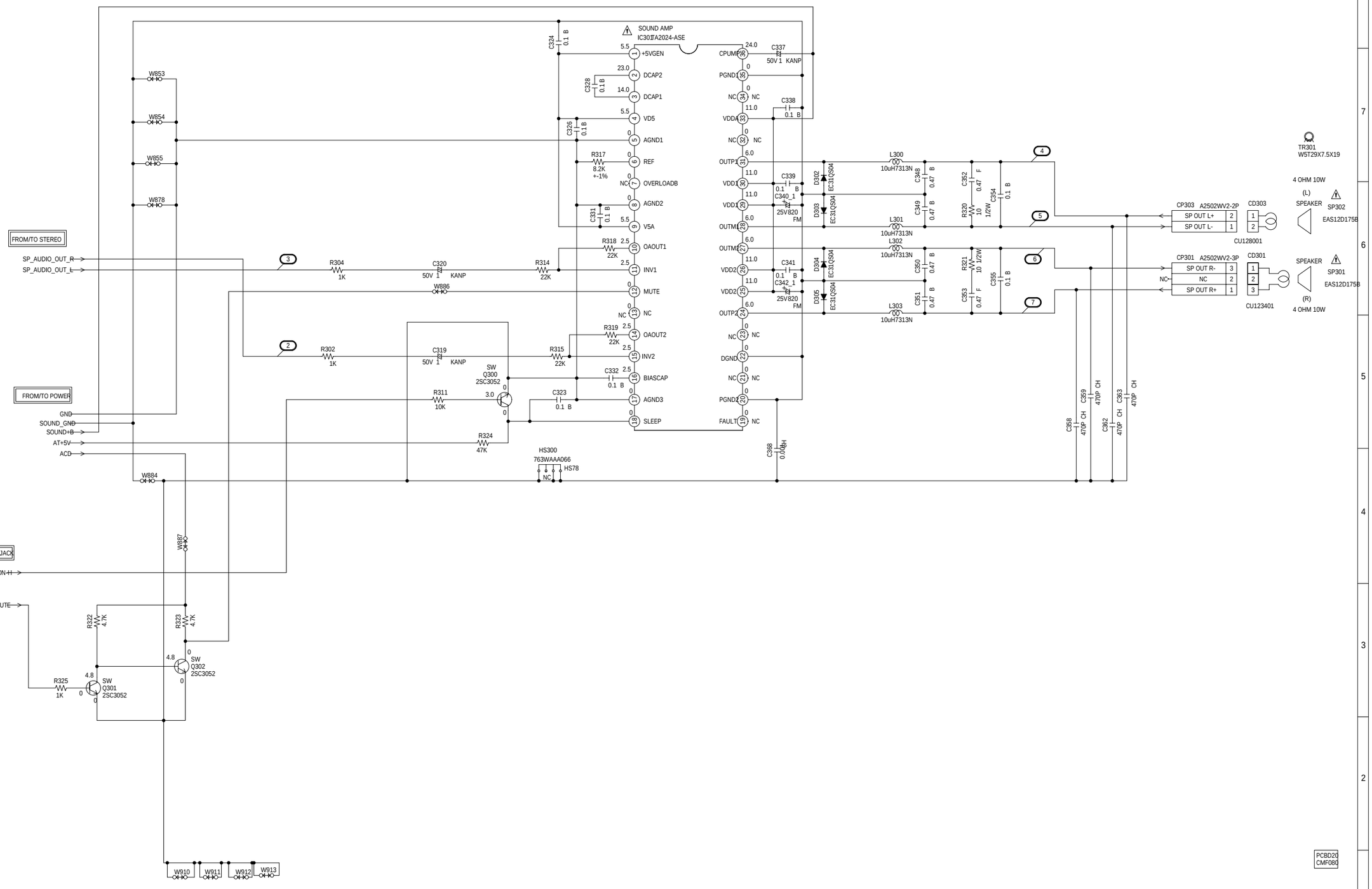
SOUND AMP/HEADPHONE AMP SCHEMATIC DIAGRAM

(AV PCB)



CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

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POWER SCHEMATIC DIAGRAM

(AV PCB)

FROM/TO POWER3
CP3802 (CP510)
A2501WV2-2P
1 9VSC
2 GND
CD3802 CU124001
L3801 22uH TSL0808
C3803 16V 1000 FM
L3810 10uH TSL0808
FROM/TO TUNER/OUT JACK
STANDBY_LED
CP3803(CP511)
A2501WV2-12P
1 5VSC
2 5VSC
3 5VSC
4 GND
5 GND
6 GND
7 12VSC
8 12VSC
9 GND
10 GND
11 ST_BY_H
12 NC
L3802 22uH TSL0808
C3801 16V 1000 FM
L3803 22uH TSL0808
C3802 16V 1000 FM
W947
FROM/TO SOUND AMP/HEADPHONE AMP
ACD
FROM/TO POWER3
CP3804(CP507)
A2501WV2-7P
1 POWER_FAIL
2 LCD-H
3 AT+5V
4 GND
5 BACKLIGHT ON
6 LIGHT_CTL
7 POWER_ON_H
R3801 2.2K
W859
L3804 22uH TSL0808
W858
W801
W942
C3804 0.001 B
R3805 4.7K
C3805 6.3V 1000 YK
B3801 W5RH3.5X5X1.0
C3806 100P CH
C3810 16V1000 FM
C3807 0.1 B
R3814 0.047 1/10W+-1%
R3816 0.047 1/10W+-1%
R3815 0.047 1/10W+-1%
C3808 0.047 B
C3809 0.1 B
R3809 22K
D3801 1SS133
R3811 VR 58K
R3813 VR 33K
C3811 27PCH
C3812 0.01 B
3.3V CONTROL
IC3801 AL1010
VIN CS
V5/PWON EXT
Vref/SS GND
CC FB
SWITCHING
Q3813 RSS050P03
R3818 1.8K +-1%
R3819 680 +-1%
R3817 VR 1K +-1%
D3802 21DQ04N
L3806 15uH SBPSC
L3807 10uH TSL0808
C3818 16V 680 FM
C3820 6.3V 1000 FM
REGULATOR
IC3804 PQ070XF01SZH
IN OUT GND
R3831 15K
R3834 22K
C3827 10V 100 YK
R3835 22K
W842
W845
L3809 6.8uH RCH8011NP-6R8L
W804
W807
C3825 25V 820 FM
C3826 25V 820 FM
C3835 0.22 MMTS
C3836 0.22 MMTS
C3831 150P CH
D3805 1H5-E
P.CON32V IC3805 LA7995M-TLM
CVCC COSC NC NC NC CP3 CP3
CP1 CP1 GND CP2 CP2 CREG COUT
C3829 0.22 MMTS
C3830 0.22 MMTS
C3832 0.22 MMTS
C3833 0.22 MMTS
C3828 0.01 B
C3834 50V 4.7V-S
C3837 50V 4.7V-S
C3850 6.3V 470 MHE
D3811 EC31QS04
D3812 EC31QS04
FROM/TO POWER3
CP3808(CP508)
A2001WV2-7P
DTV UNREG+5V 1
DTV UNREG+5V 2
DTV UNREG+4V 3
DTV UNREG+4V 4
GND 5
GND 6
GND 7
FROM/TO TUNER
UNREG+5V
UNREG+4V
P.CON+32V
C3852 6.3V 470 MHE
FROM/TO AV JACK2
P.CON+5V
GND
FROM/TO TUNER/OUT JACK
AT+5V
GND
FROM/TO STEREO
D3804 1H3-E
P.CON+8V
P.CON+5V
AT+5V
GND
FROM/TO AV JACK
P.CON+5V
GND
FROM/TO AV SWITCH2
AT+5V
AT+3.3V
P.CON+9V
P.CON+5V
GND
FROM/TO TUNER/OUT JACK
PSU_ACD/P.FAIL
PSU_5VD/DSR/LIGHT_CTL
VS_ON/LCDON
RLY_ON/LCD-H
POWER_ON-H
FROM/TO RREGULATOR
CP3807 (CP3201)
A2001WV2-11P
P.CON+12V 1
P.CON+9V 2
P.CON+5V 3
AT+3.3V 4
P.CON+3.8V 5
P.CON+3.8V 6
GND 7
GND 8
GND 9
P.CON+5V 10
AT+5V 11
R3807 VR 3.9K
TR304 W5T29X7.5X19
CD3807 CU2B6601
FROM/TO SOUND AMP/HEADPHONE AMP
AT+5V
GND
SOUND+B
SOUND_GND
FROM/TO POWER3
CP3801 (CP512)
A2501WV2-4P
1 SOUND+B
2 SOUND+B
3 SOUND GND
4 SOUND GND
PCBD20
CMF080

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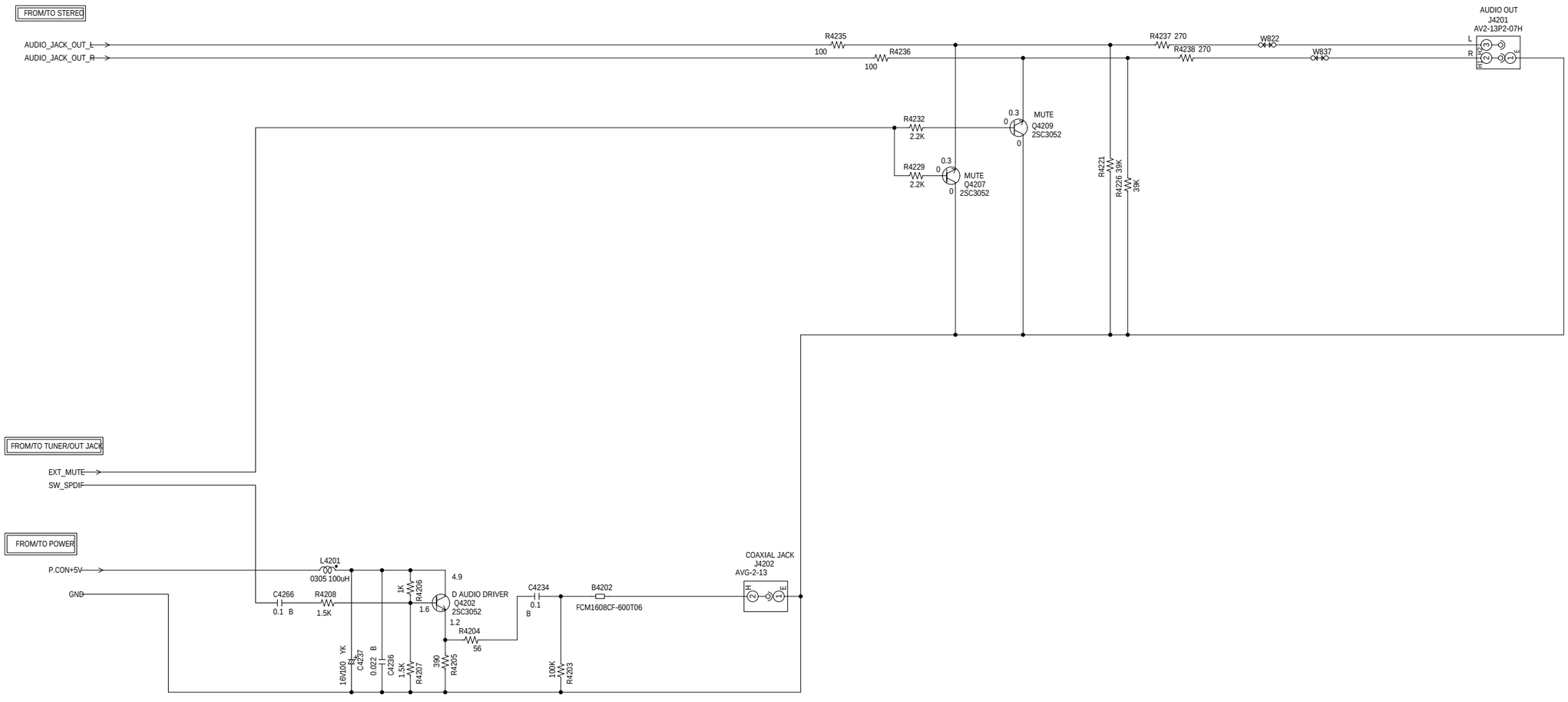
AV JACK2 SCHEMATIC DIAGRAM

(AV PCB)



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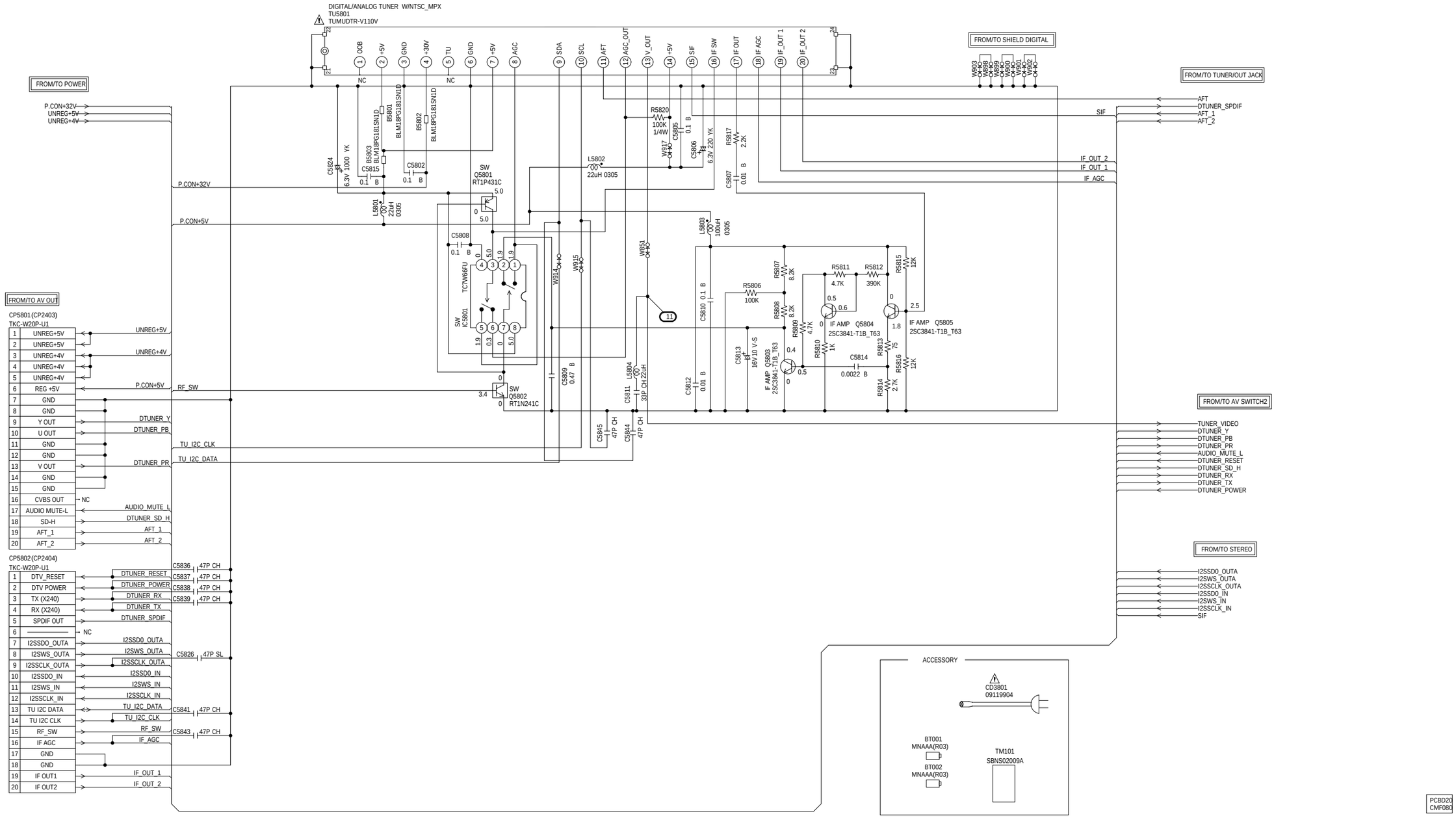
TUNER SCHEMATIC DIAGRAM

(AV PCB)



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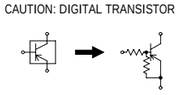

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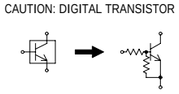
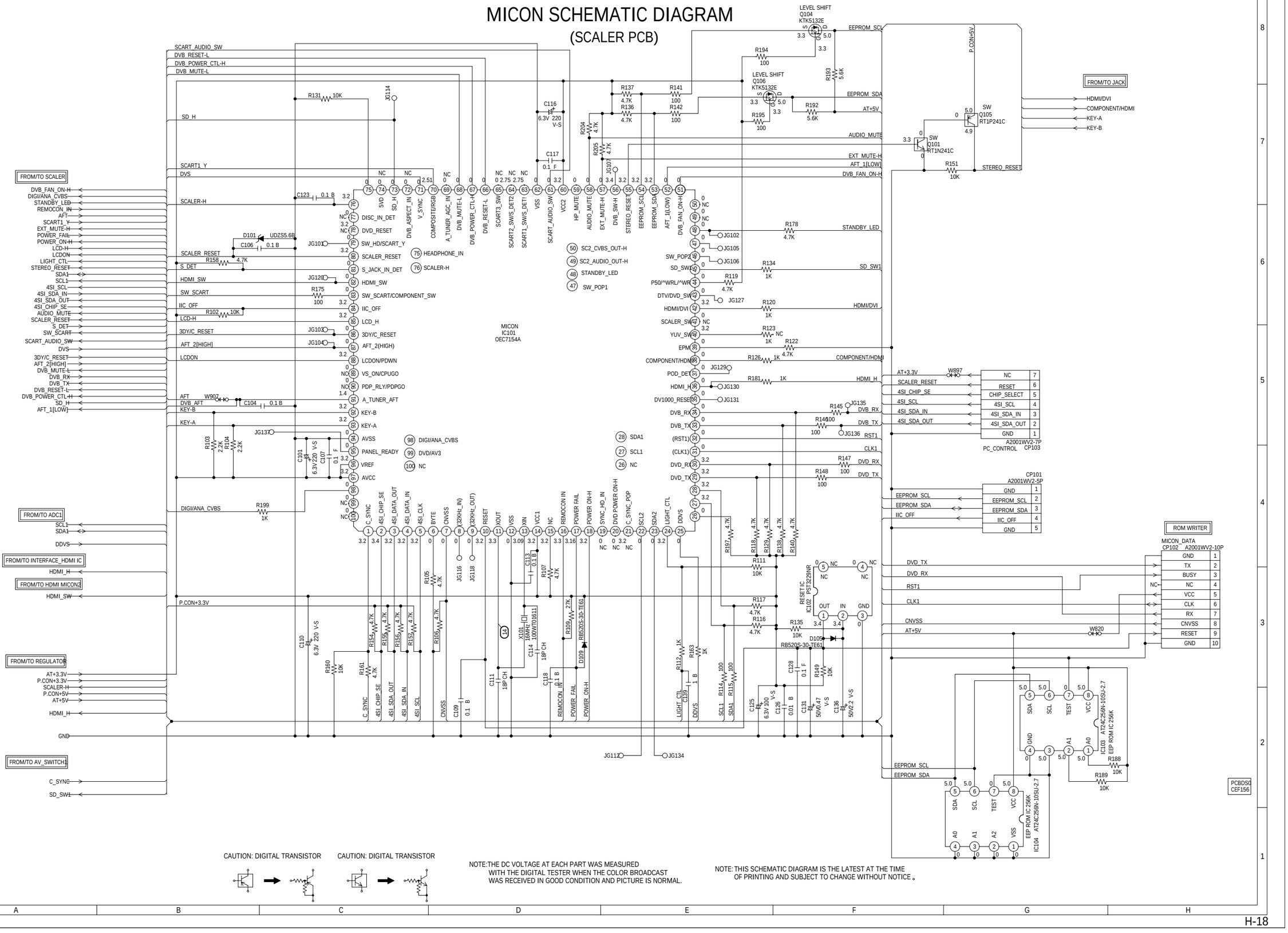


MICON SCHEMATIC DIAGRAM

(SCALER PCB)



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SCALER SCHEMATIC DIAGRAM

(SCALER PCB)

FROM/TO TUNER/OUT JACK

CP802(CP4204)
00_6232_030_006_800+

1	STANDBY LED	STANDBY_LED
2	REMOCON IN	REMOCON_IN
3	AFT	AFT
4	NC	
5	NC	
6	AUDIO_MUTE	AUDIO_MUTE
7	EXT_MUTE-H	EXT_MUTE-H
8	GND	
9	SCART1_B	
10	GND	
11	SCART1_G	SW2_B/CB
12	GND	SW2_G/Y
13	SCART1_R	SW2_R/CR
14	GND	
15	AFT_2/DTV_CVBS	AFT_2[HIGH]
16	GND	
17	SCART1_Y	SCART1_Y
18	NC	
19	NC	
20	POWER_FAIL	POWER_FAIL
21	POWER_ON-H	POWER_ON-H
22	AFT_1	AFT_1[LOW]
23	LCDON	LCDON
24	DVB_FAN_ON-H	DVB_FAN_ON-H
25	LCD-H/PDP_RLY	LCD-H
26	S_DET	S_DET
27	NC	
28	SW_YUV1/2	SW_SCART
29	NC	
30	LIGHT CTL/PSU_5VD	LIGHT_CTL

FROM/TO AV SWITCH2

CP803(CP4203)
00_6232_029_006_800+

1	NC	
2	DTUNER_H	DIGI/ANA_CVBS
3	DTV_MUTE_L	DVB_MUTE-L
4	NC	
5	DTUNER_RX	DVB_RX
6	GND	
7	DTUNER_TX	DVB_TX
8	GND	
9	DTUNER_RESET_L	DVB_RESET-L
10	GND	
11	SW_AUDIO_R(PC)	SW_AUDIO_R[PC]
12	GND	
13	SW_AUDIO_L(PC)	SW_AUDIO_L[PC]
14	NC	
15	STEREO_RESET	STEREO_RESET
16	NC	
17	SCART_AUDIO_SW	SCART_AUDIO_SW
18	SDA1	SDA1
19	SCL1	SCL1
20	GND	
21	DTUNER_POWER	DVB_POWER_CTL-H
22	GND	
23	DTUNER_SD_H	SD_H
24	GND	
25	SWITCH_CVBS	SWITCH_CVBS
26	GND	
27	SWITCH_VIDEO_Y	SW_VIDEO_Y
28	GND	
29	SWITCH_VIDEO_C	SW_VIDEO_C

FROM/TO AV SWITCH1

SW_G/SW_Y
SW_R/SW_CR
SW_B/SW_CB
SW2_R/CR
SW2_G/Y
SW2_B/CB
SW_CVBS
SW_VIDEO_Y

SCALER
IC801
R8J66607A72FP

FROM/TO MICON

STANDBY_LED
REMOCON_IN
AFT
SCART1_Y
EXT_MUTE-H
POWER_FAIL
POWER_ON-H
LCD-H
LCDON
LIGHT_CTL
STEREO_RESET
AUDIO_MUTE
SDA1
SCL1
SCALER_RESET
4SI_CHIP_SE
4SI_SDA_OUT
4SI_SDA_IN
4SI_SCL
S_DET
SW_SCART
SCART_AUDIO_SW
AFT_1[LOW]
DVB_FAN_ON-H
3DY/C_RESET
AFT_2[HIGH]
DVB_MUTE-L
DVB_RX
DVB_TX
DVB_RESET-L
DVB_POWER_CTL-H
SD_H
DIGI/ANA_CVBS
DVS

FROM/TO ADC1

DDHS
DDVS
DDCK
DPG7
DPG6
DPG5
DPG4
DPG3
DPG2
DPG1
DPG0
DPR7
DPR6
DPR5
DPR4
DPR3
DPR2
DPR1
DPR0
DPB7
DPB6
DPB5
DPB4
DPB3
DPB2
DPB1
DPB0

FROM/TO LVDS

DR9_W/O_DV
DR8_W/O_DV
DR7_W/O_DV
DV6_W/O_DV
DR5_W/O_DV
DR4_W/O_DV
DR3_W/O_DV
DR2_W/O_DV
DB9_W/O_DV
DB8_W/O_DV
DB7_W/O_DV
DB6_W/O_DV
DB5_W/O_DV
DB4_W/O_DV
DB3_W/O_DV
DB2_W/O_DV
DG9_W/O_DV
DG8_W/O_DV
DG7_W/O_DV
DG6_W/O_DV
DG5_W/O_DV
DG4_W/O_DV
DG3_W/O_DV
DG2_W/O_DV
DCLK1
DHS
DEN
DVS

FROM/TO REGULATOR

P.CON+1.5V
P.CON+3.3V
GND

FROM/TO JACK

SW_AUDIO_R[PC]
SW_AUDIO_L[PC]

PCBDSC
CEF156

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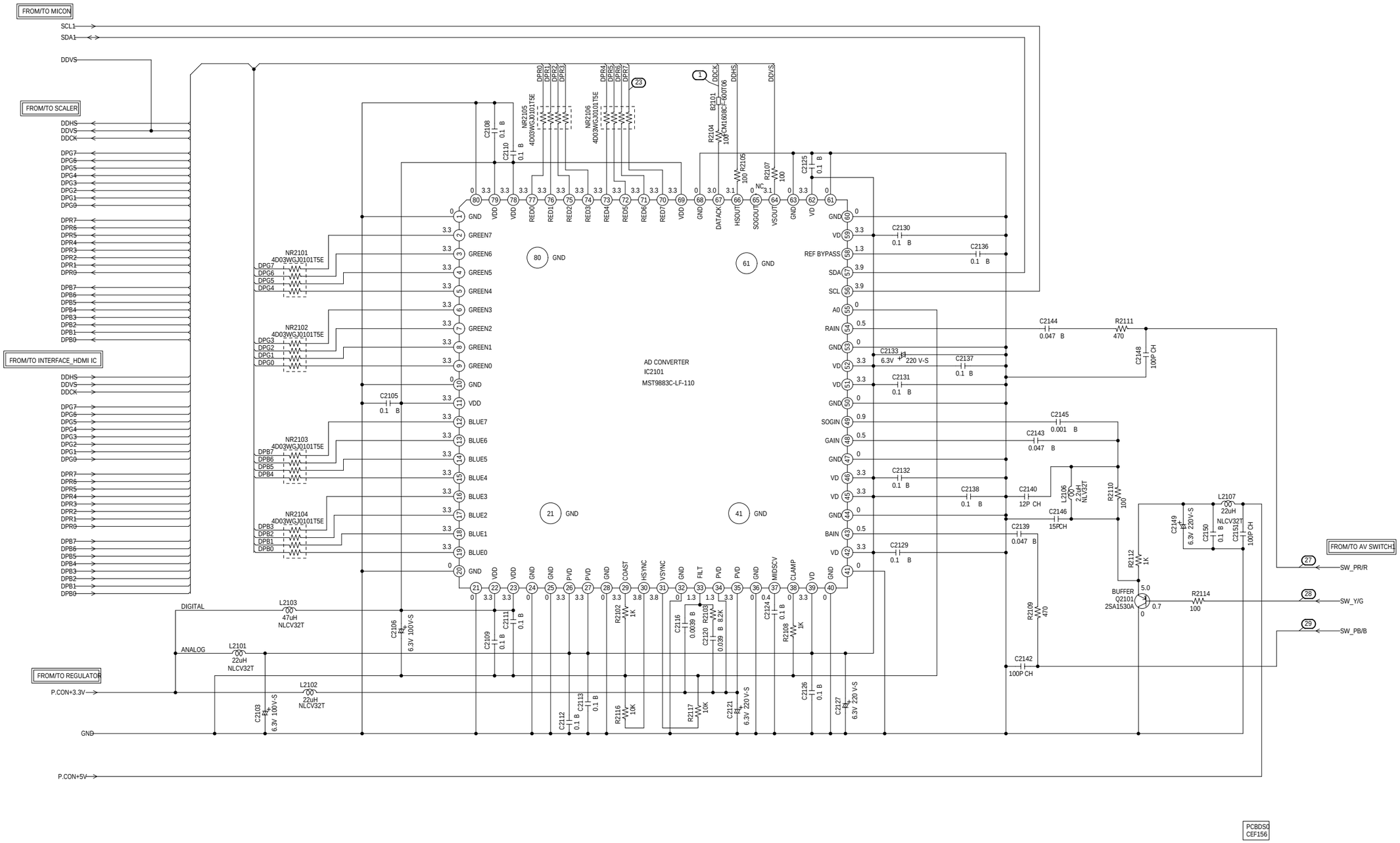
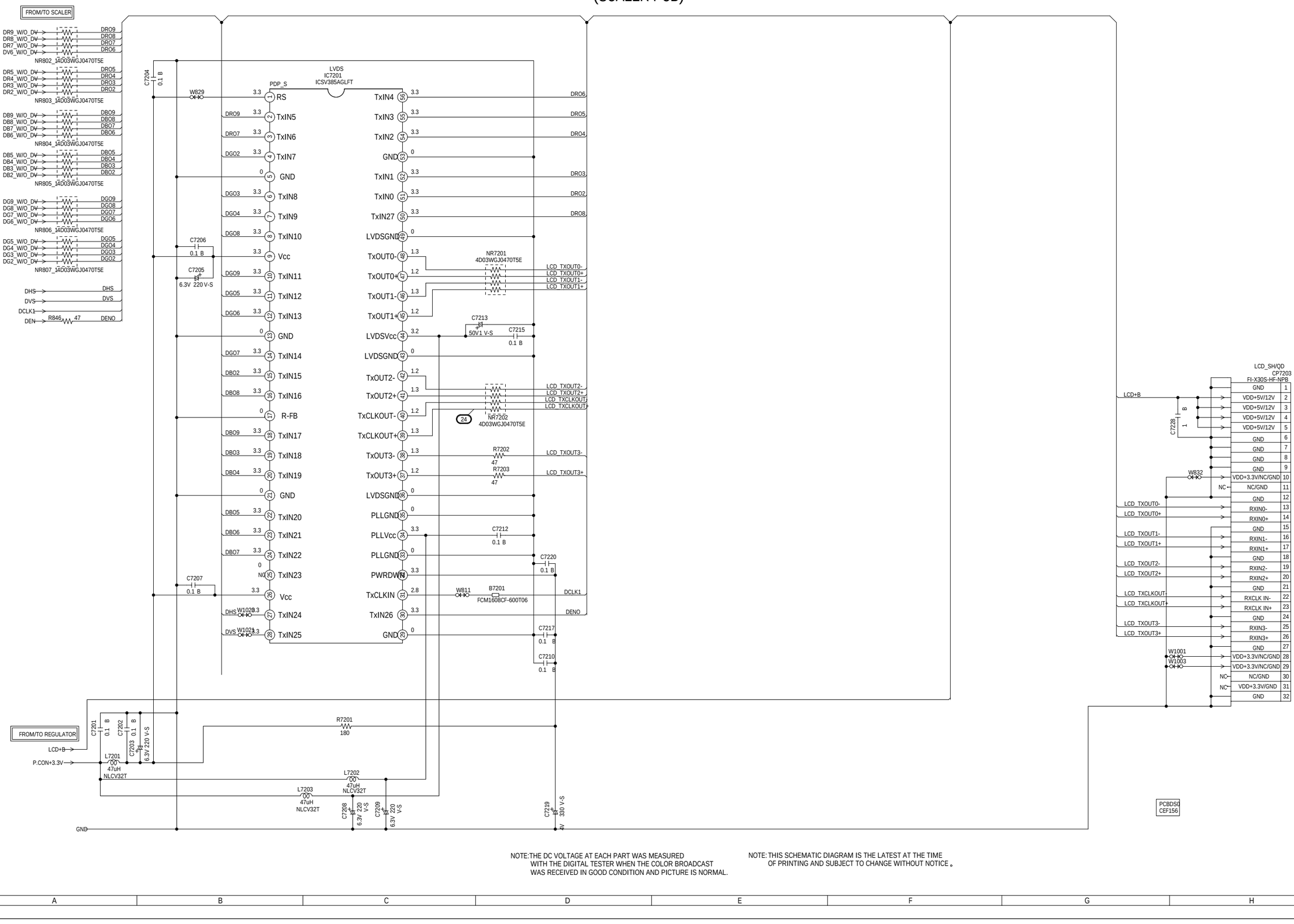
ADC1 SCHEMATIC DIAGRAM

(SCALER PCB)



LVDS SCHEMATIC DIAGRAM
(SCALER PCB)



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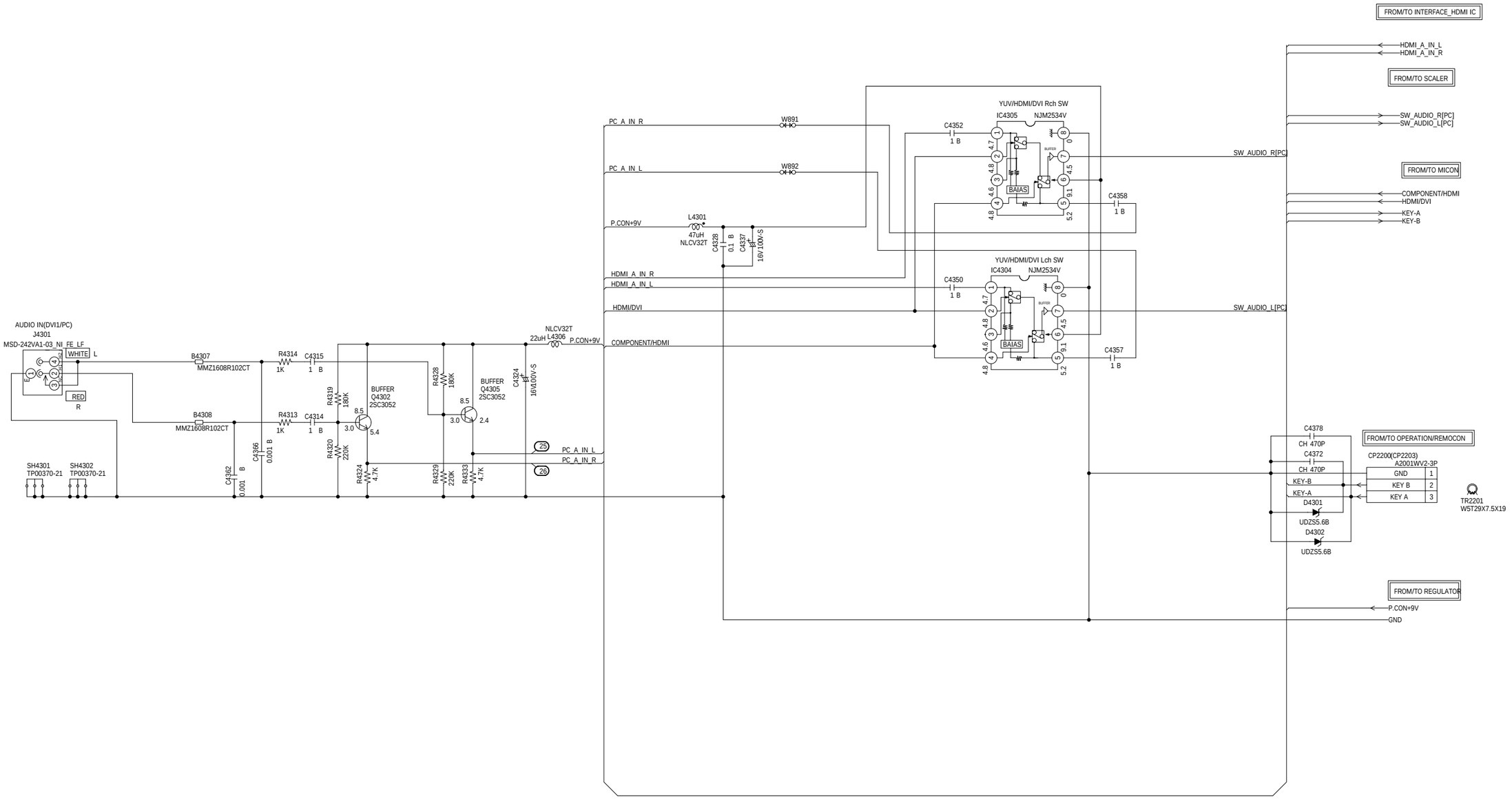
JACK SCHEMATIC DIAGRAM
(SCALER PCB)

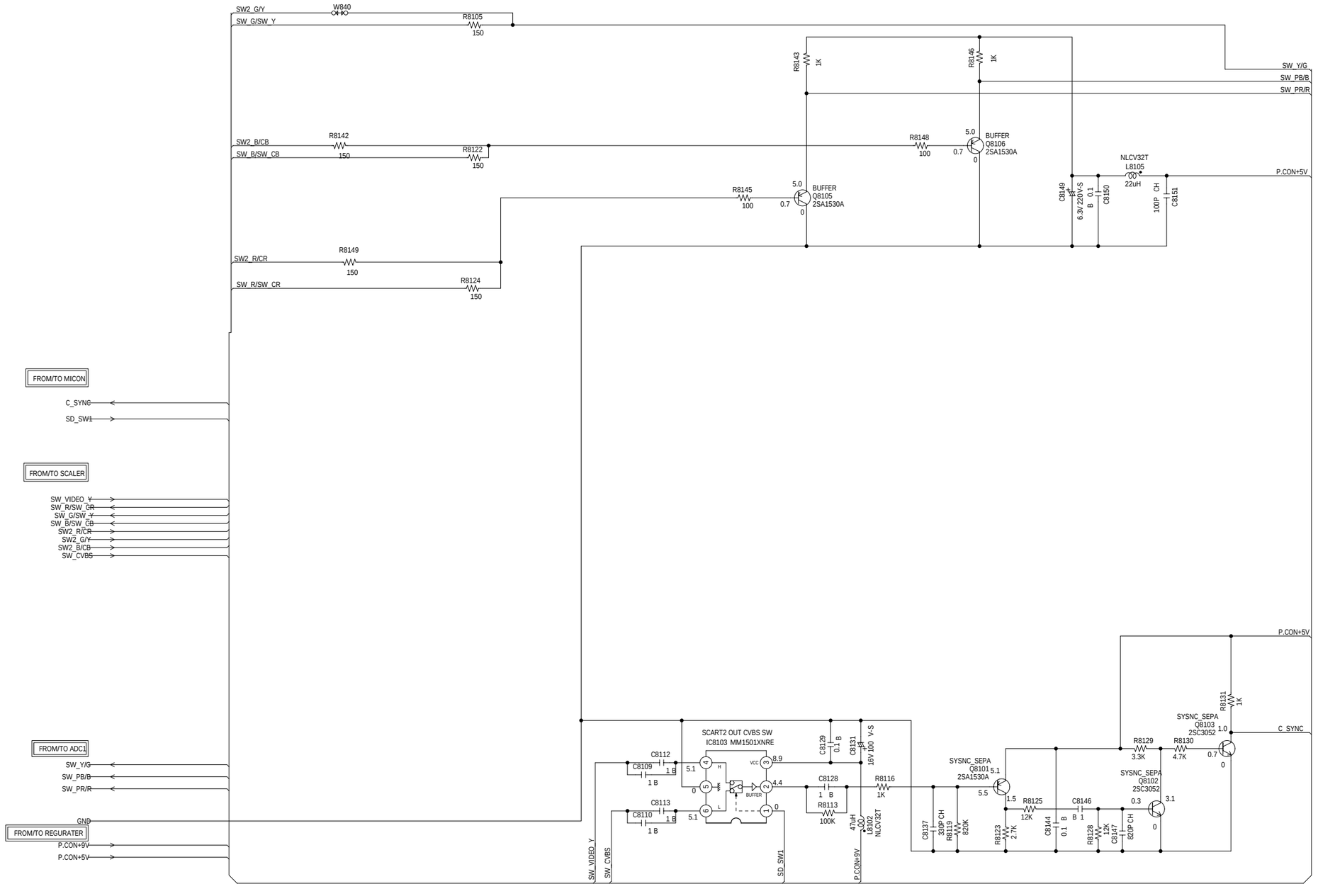


NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

AV SWITCH1 SCHEMATIC DIAGRAM

(SCALER PCB)



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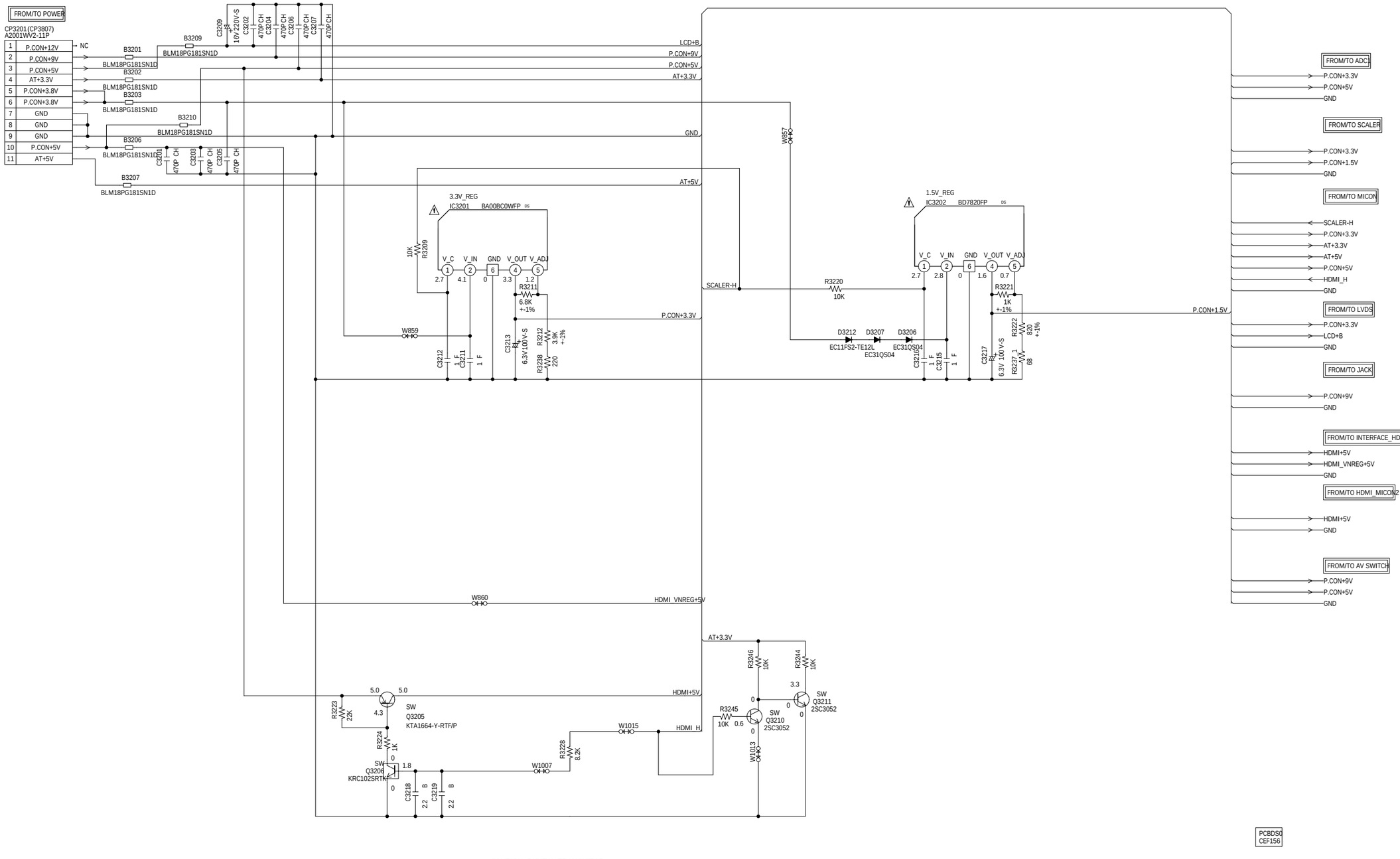
REGULATOR SCHEMATIC DIAGRAM

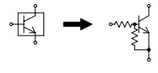
(SCALER PCB)



CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION: DIGITAL TRANSISTOR



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INTERFACE_HDMI IC SCHEMATIC DIAGRAM

(SCALER PCB)

HDMI CONNECTOR
CP3601 DC1R019JDA
(CP3603)

19	DET
18	POWER
17	GND
16	SDA
15	SCL
14	NC
13	NC
12	CLK-
11	CLK-S
10	CLK+
9	D0-
8	D0-S
7	D0+
6	D1-
5	D1-S
4	D1+
3	D2-
2	D2-S
1	D2+

CP3603 (CP3601)

19	DET
18	POWER
17	GND
16	SDA
15	SCL
14	NC
13	NC
12	CLK-
11	CLK-S
10	CLK+
9	D0-
8	D0-S
7	D0+
6	D1-
5	D1-S
4	D1+
3	D2-
2	D2-S
1	D2+

HDMI CONNECTOR
DC1R019JDA

HDMI_I/F
IC3605
Sil9021CTU

FROM/TO ADC
FROM/TO REGULATOR
FROM/TO MICON
FROM/TO JACK
FROM/TO HDMI MICON2

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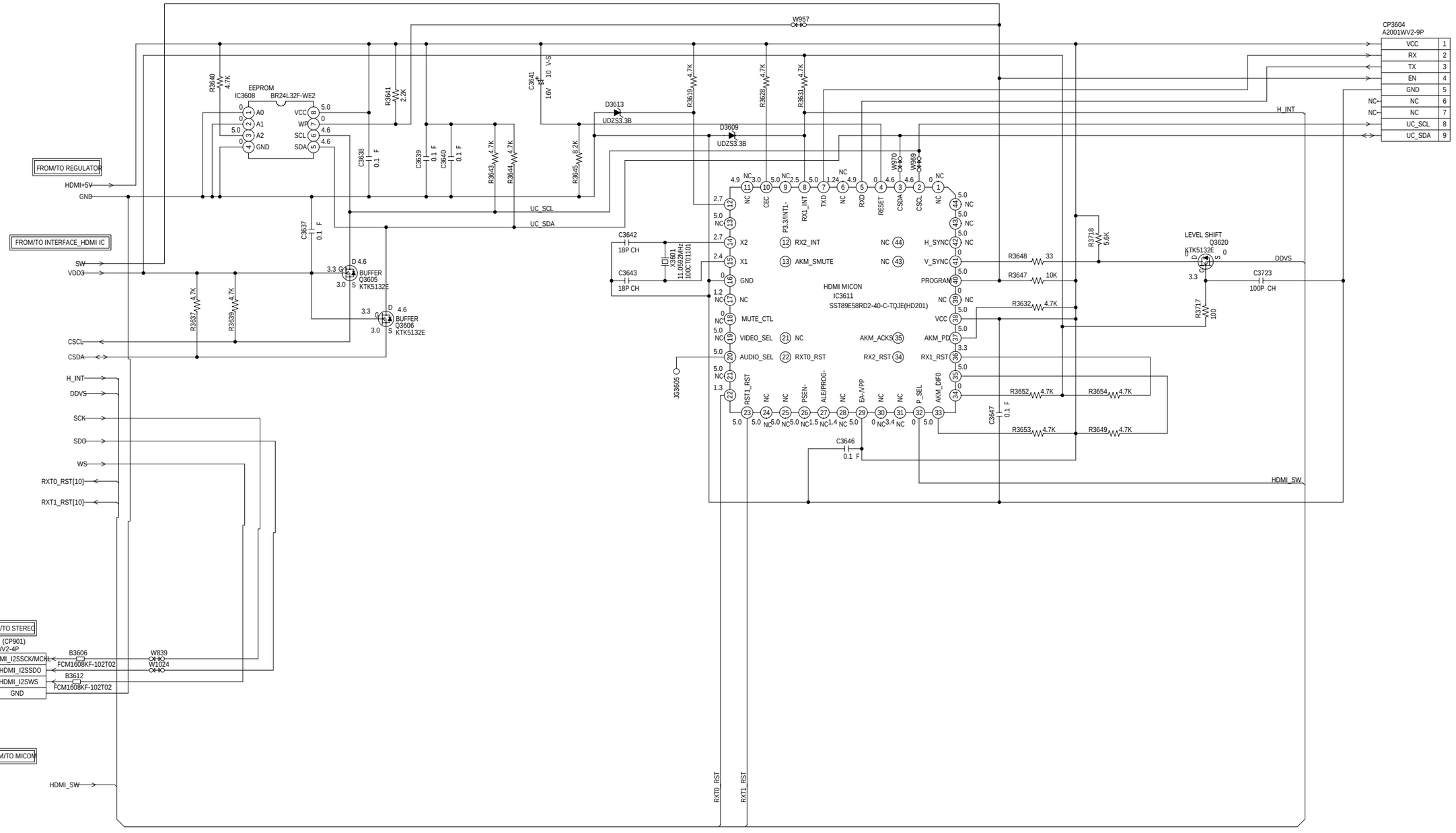
CAUTION: DIGITAL TRANSISTOR

PCBDS0
CEE156

HDMI MICON2 SCHEMATIC DIAGRAM

(SCALER PCB)



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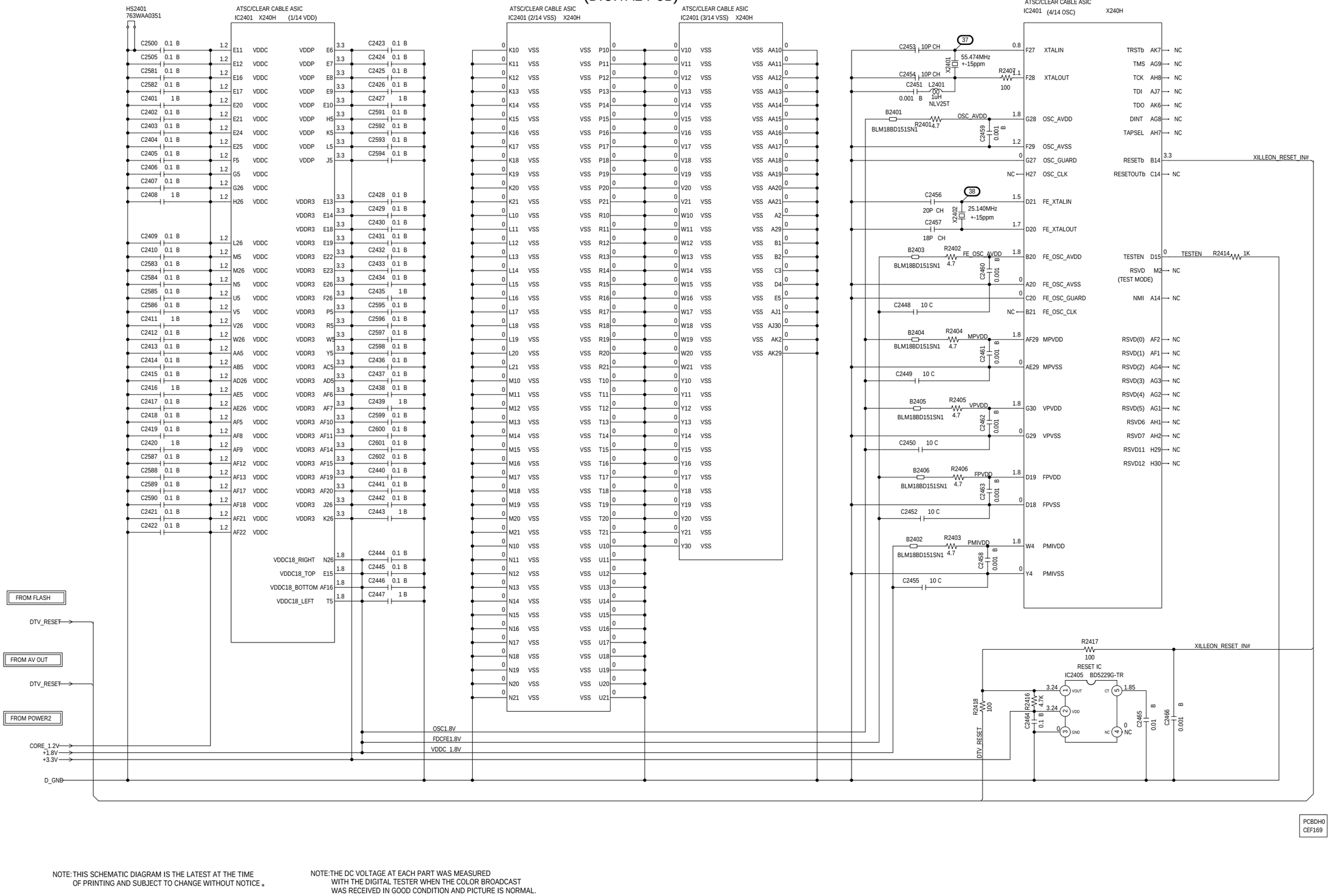
PCBDS0
CEF156

ASIC SCHEMATIC DIAGRAM

(DIGITAL PCB)



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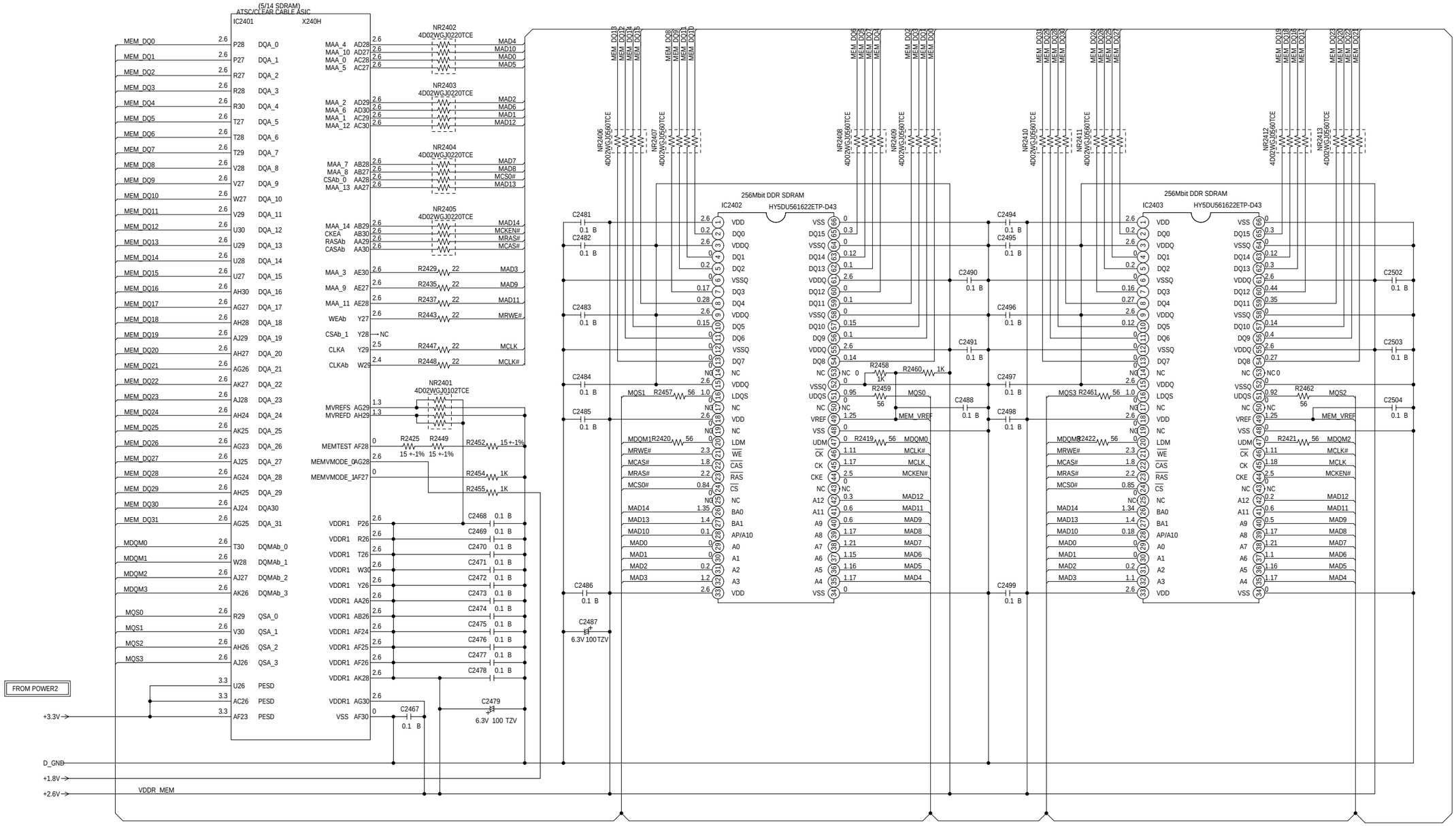
SDRAM SCHEMATIC DIAGRAM

(DIGITAL PCB)



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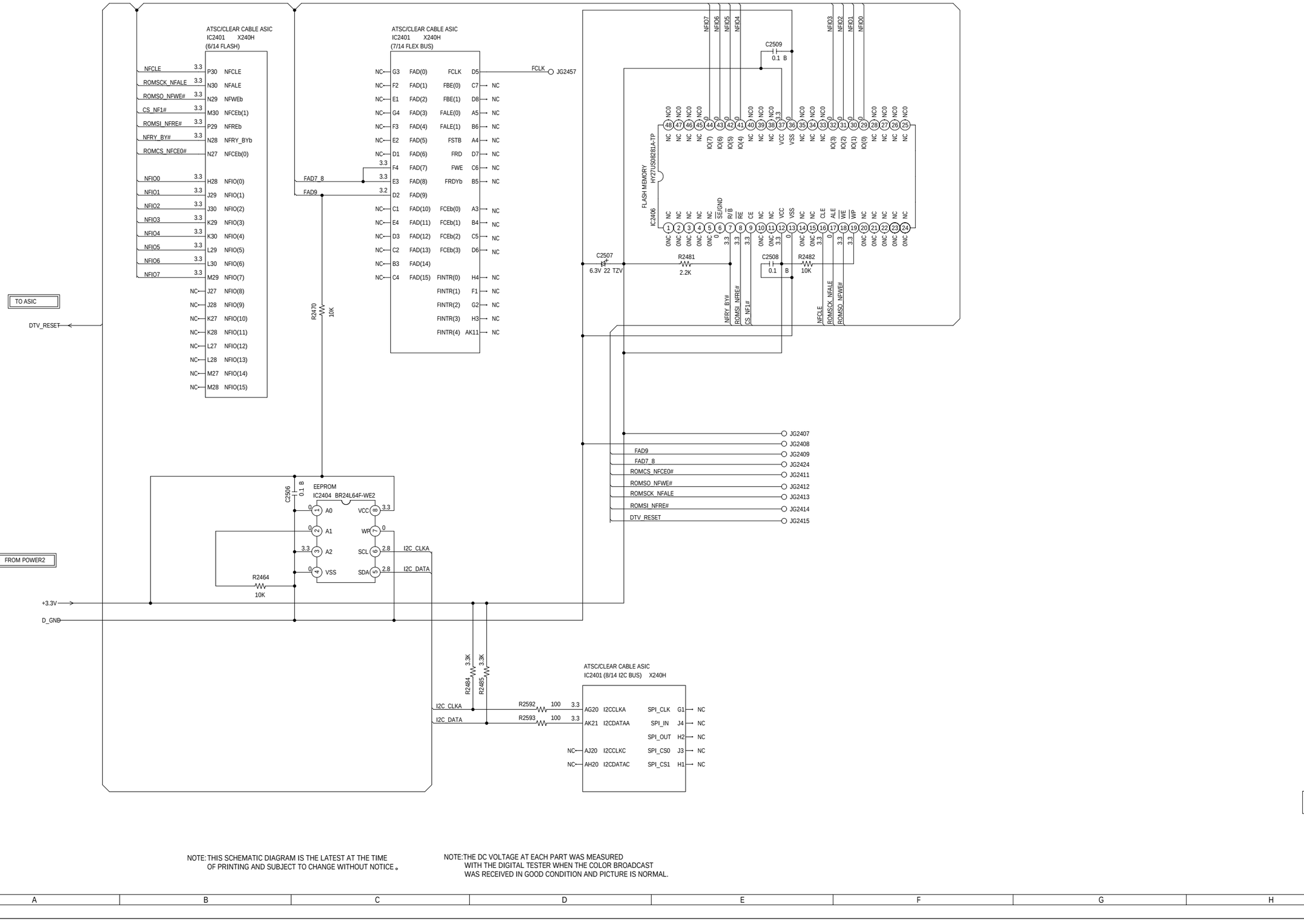
PCBDH0
CEF169

FLASH SCHEMATIC DIAGRAM

(DIGITAL PCB)



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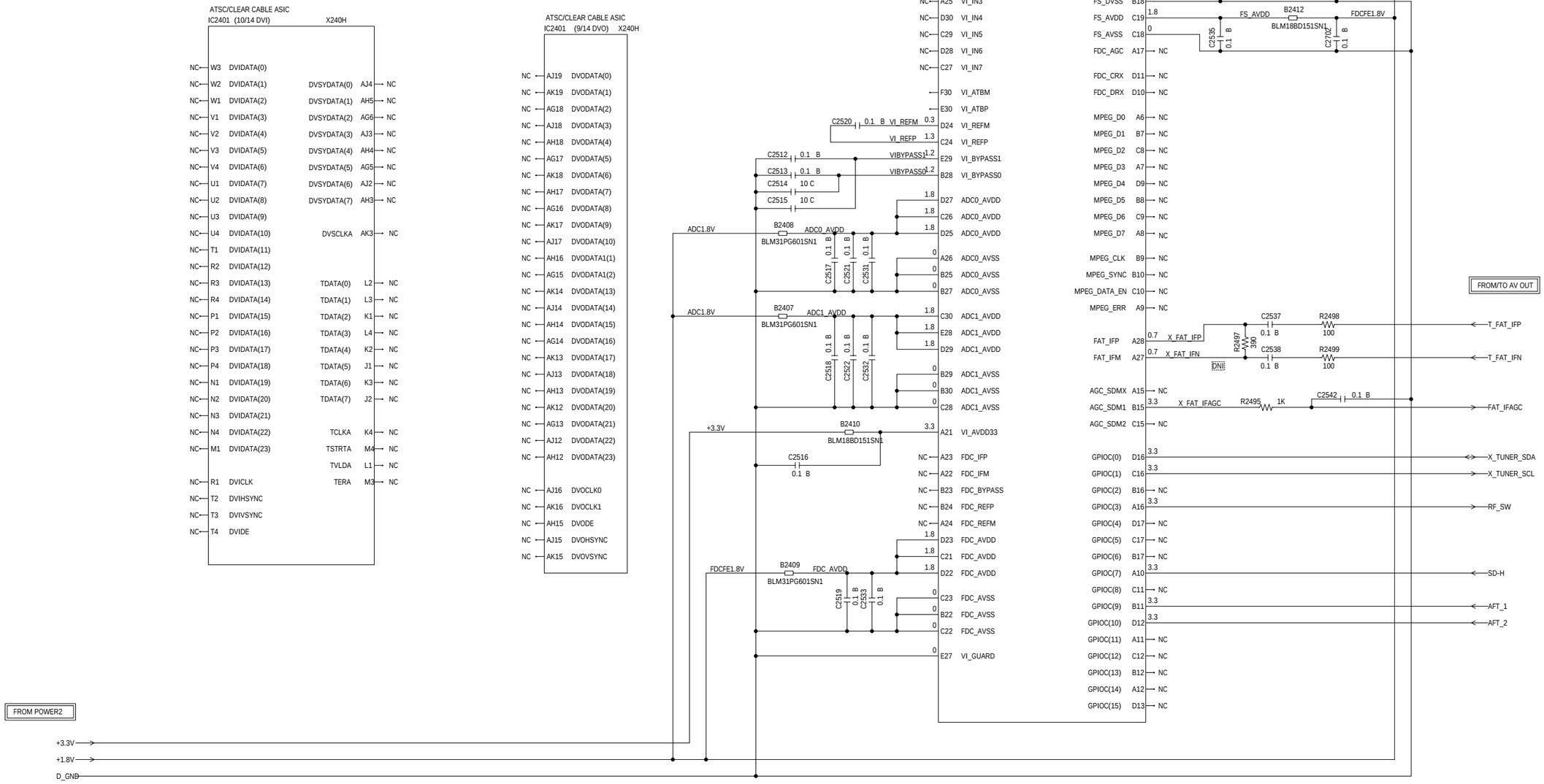
FRONT END SCHEMATIC DIAGRAM
(DIGITAL PCB)



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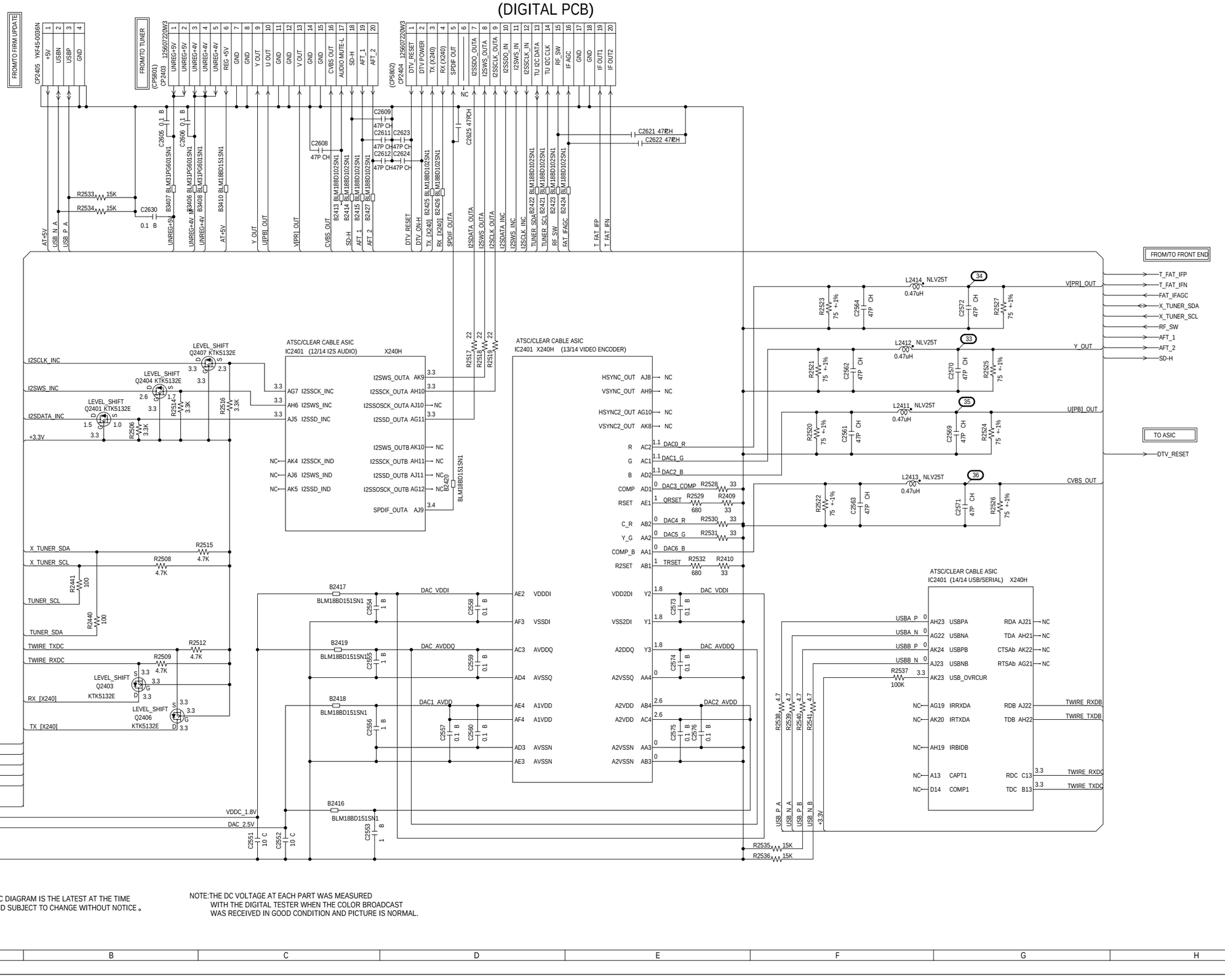
AV OUT SCHEMATIC DIAGRAM

(DIGITAL PCB)



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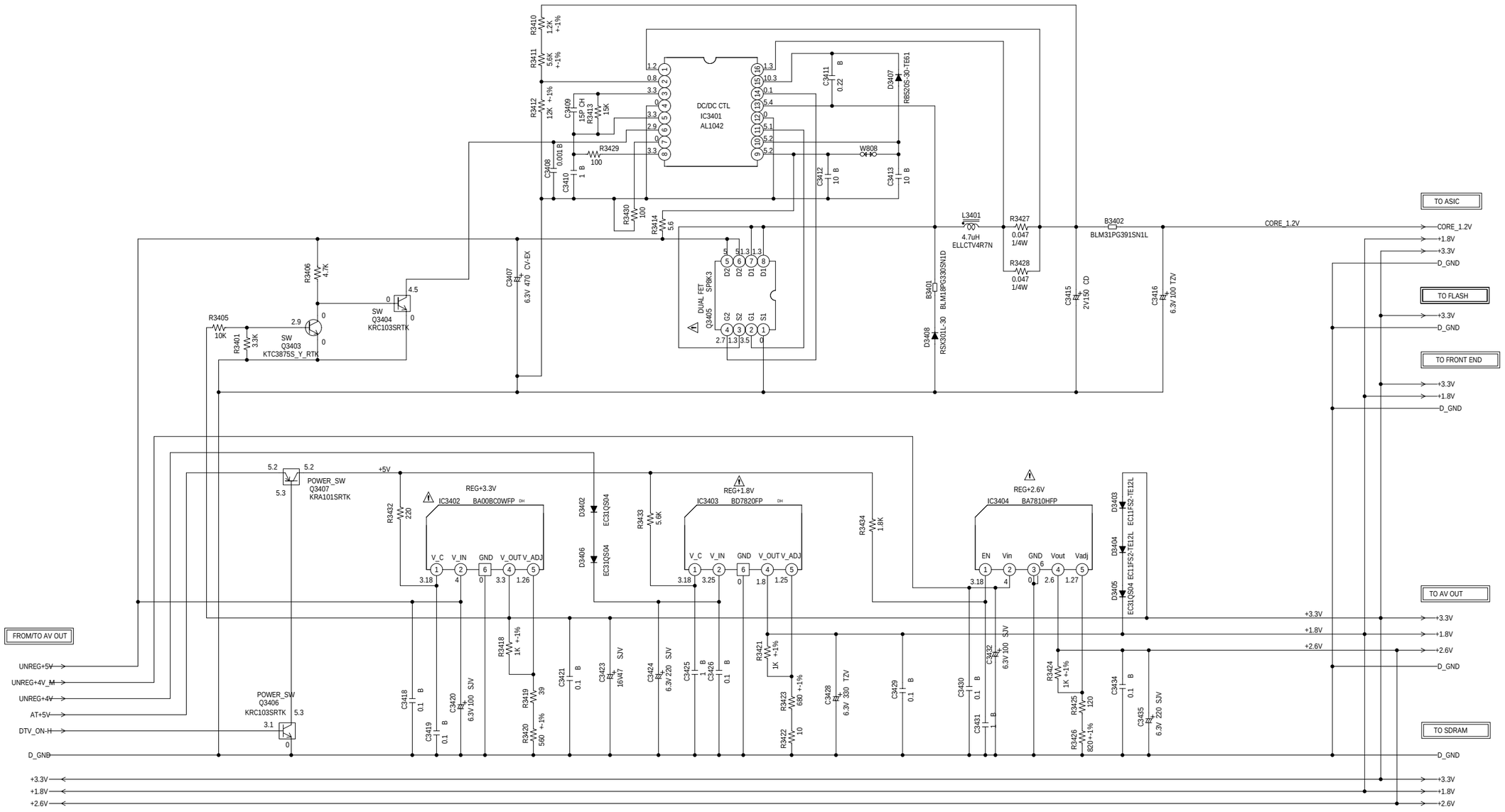
POWER2 SCHEMATIC DIAGRAM

(DIGITAL PCB)



PCBDH0
CEF169

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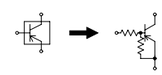
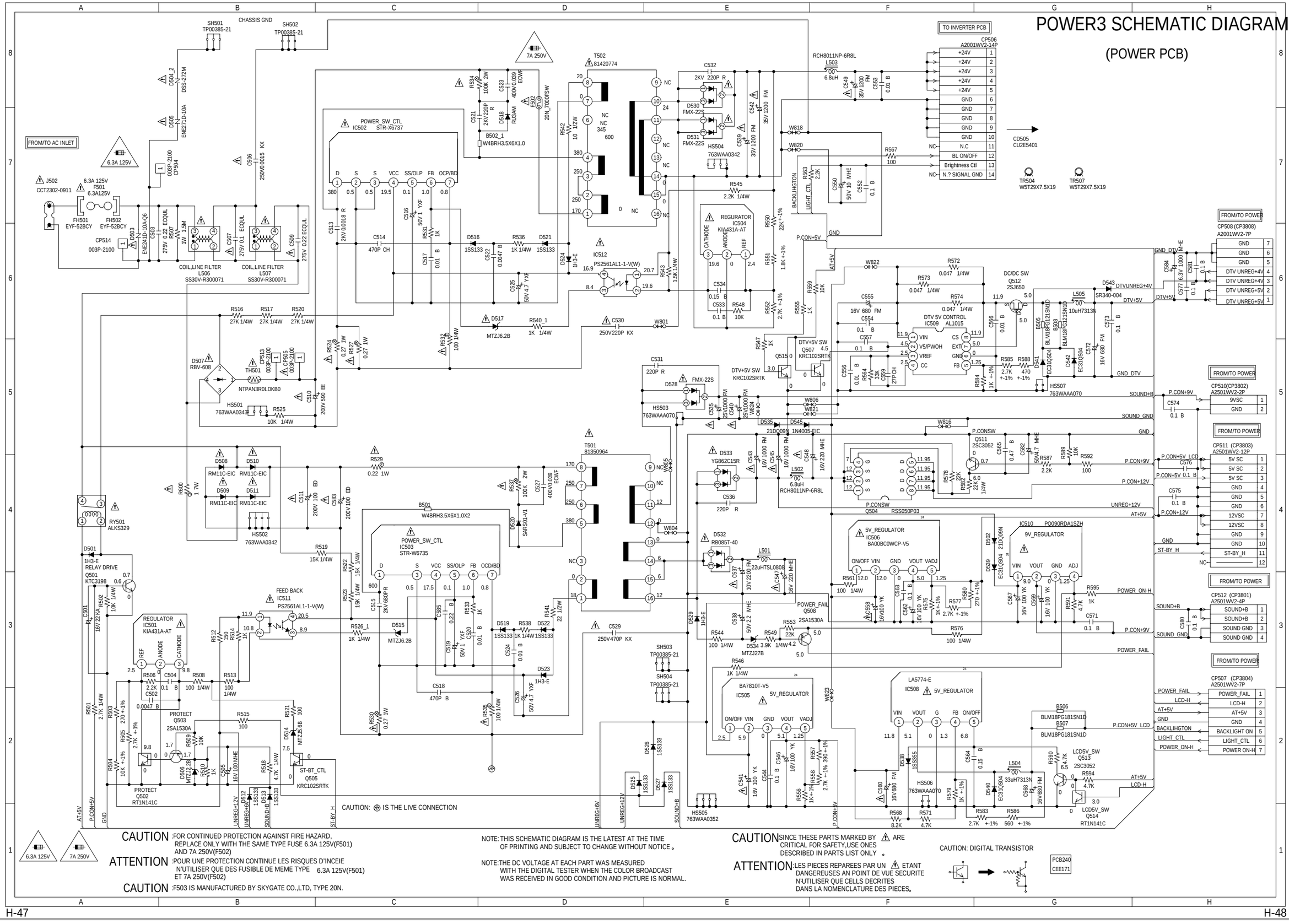


CAUTION: DIGITAL TRANSISTOR

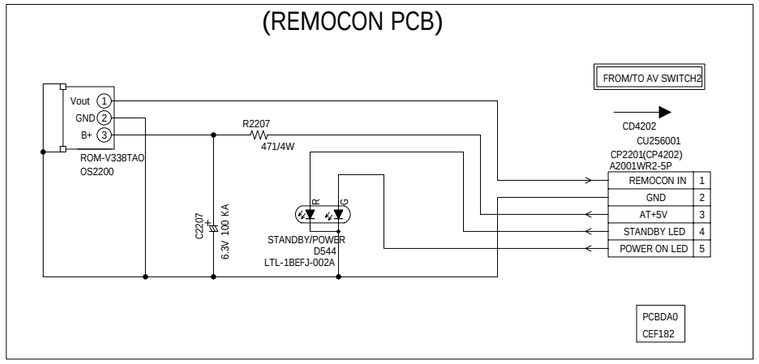
POWER3 SCHEMATIC DIAGRAM

(POWER PCB)

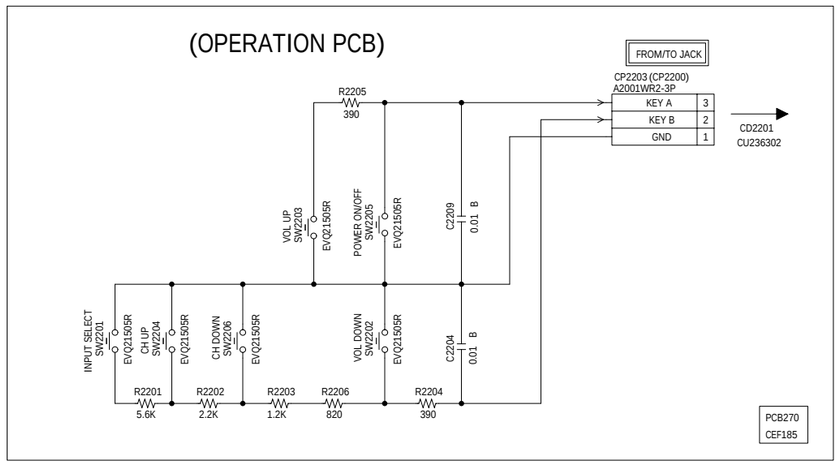


OPERATION/REMOCON SCHEMATIC DIAGRAM

(REMOCON PCB)



(OPERATION PCB)



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INTERCONNECTION DIAGRAM

CP506	
1	+24V
2	+24V
3	+24V
4	+24V
5	+24V
6	GND
7	GND
8	GND
9	GND
10	GND
11	N.C
12	BL ON/OFF
13	Brightness Ctl
14	N.? SIGNAL GND

POWER PCB
PCB240
CEE171

CD3801 — J502

CP510		CD3802	CP3802	
9VSC	1	→	1	9VSC
GND	2	→	2	GND

CP512		CD3805	CP3801	
SOUND+B	1	→	1	SOUND+B
SOUND+B	2	→	2	SOUND+B
SOUND GND	3	→	3	SOUND GND
SOUND GND	4	→	4	SOUND GND

CP508		CD3806	CP3808	
GND	7	→	7	GND
GND	6	←	6	GND
GND	5	→	5	GND
DTV UNREG+4V	4		4	DTV UNREG+4V
DTV UNREG+4V	3	←	3	DTV UNREG+4V
DTV UNREG+5V	2	→	2	DTV UNREG+5V
DTV UNREG+5V	1		1	DTV UNREG+5V

CP511		CD3803	CP3803	
5VSC	1	→	1	5VSC
5VSC	2	→	2	5VSC
5VSC	3	→	3	5VSC
GND	4		4	GND
GND	5		5	GND
GND	6		6	GND
12VSC	7	→	7	12VSC
12VSC	8	→	8	12VSC
GND	9		9	GND
GND	10		10	GND
ST-BY_H	11	←	11	ST-BY_H
———	12	→	12	———

CP507			CP3804	
POWER_FAIL	1	←	1	POWER_FAIL
LCD-H	2	←	2	LCD-H
AT+5V	3	→	3	AT+5V
GND	4		4	GND
BACKLIGHT ON	5	←	5	BACKLIGHT ON
LIGHT_CTL	6	←	6	LIGHT_CTL
POWER ON-H	7	←	7	POWER ON-H

AV PCB
PCBD20
CMF080

CP2403			CP5801(CP2403)	
UNREG+5V	1	→	1	UNREG+5V
UNREG+5V	2	→	2	UNREG+5V
UNREG+4V	3	→	3	UNREG+4V
UNREG+4V	4	→	4	UNREG+4V
UNREG+4V	5	→	5	UNREG+4V
REG +5V	6	→	6	REG +5V
GND	7		7	GND
GND	8		8	GND
Y OUT	9	←	9	Y OUT
U OUT	10	←	10	U OUT
GND	11		11	GND
GND	12		12	GND
V OUT	13	←	13	V OUT
GND	14		14	GND
GND	15		15	GND
CVBS OUT	16	←	16	CVBS OUT
AUDIO MUTE-L	17	←	17	AUDIO MUTE-L
SD-H	18	→	18	SD-H
AFT(0)	19	→	19	AFT_1
AFT(1)	20	→	20	AFT_2

CP2404			CP5802(CP2404)	
DTV_RESET	1	→	1	DTV_RESET
DTV POWER	2	→	2	DTV POWER
TX (X240)	3	←	3	TX (X240)
RX (X240)	4	→	4	RX (X240)
SPDIF OUT	5	←	5	SPDIF OUT
———	6	←	6	———
I2SSDO_OUTA	7	←	7	I2SSDO_OUTA
I2SWS_OUTA	8	←	8	I2SWS_OUTA
I2SSCLK_OUTA	9	←	9	I2SSCLK_OUTA
I2SSDO_IN	10	→	10	I2SSDO_IN
I2SWS_IN	11	→	11	I2SWS_IN
I2SSCLK_IN	12	→	12	I2SSCLK_IN
TU I2C DATA	13	↔	13	TU I2C DATA
TU I2C CLK	14	←	14	TU I2C CLK
RF_SW	15	←	15	RF_SW
IF AGC	16	←	16	IF AGC
GND	17		17	GND
GND	18		18	GND
IF OUT1	19	←	19	IF OUT1
IF OUT2	20	←	20	IF OUT2

DIGITAL PCB
PCBDH0
CEF169

CP2405	
1	+5V
2	USBN
3	USBP
4	GND

4 OHM 10W (L) SPEAKER — SP302 — CD303
4 OHM 10W (R) SPEAKER — SP301 — CD301

CP303		
SP OUT L+	2	1
SP OUT L-		

CP301		
SP OUT R-	3	
NC	2	
SP OUT R+	1	

CS_IN 4/5
J4211 — RED, RED, BLUE, BLUE, GREEN, GREEN

AUDIO_IN 4/5
J4204 — RED, RED, WHITE, WHITE

CP4204		FFC CD4204	CP802	
STANDBY LED	30	30 → 1	1	STANDBY LED
REMOCON IN	29	29 → 2	2	REMOCON IN
AFT	28	28 → 3	3	AFT
———	27	27 → 4	4	———
———	26	26 → 5	5	———
AUDIO_MUTE	25	25 → 6	6	AUDIO_MUTE
EXT_MUTE-H	24	24 → 7	7	EXT_MUTE-H
GND	23	23 → 8	8	GND
SCART1_B	22	22 → 9	9	SCART1_B
GND	21	21 → 10	10	GND
SCART1_G	20	20 → 11	11	SCART1_G
GND	19	19 → 12	12	GND
SCART1_R	18	18 → 13	13	SCART1_R
GND	17	17 → 14	14	GND
AFT_2/DTV-CVBS	16	16 ← 15	15	AFT_2/DTV_CVBS
GND	15	15 → 16	16	GND
NC SCART1_Y	14	14 ← 17	17	SCART1_Y
———	13	13 → 18	18	———
———	12	12 → 19	19	———
POWER_FAIL	11	11 → 20	20	POWER_FAIL
POWER_ON-H	10	10 → 21	21	POWER_ON-H
AFT_1	9	9 → 22	22	AFT_1
LCDON	8	8 → 23	23	LCDON
NC DVB_FAN_ON-H	7	7 ← 24	24	DVB_FAN_ON-H
LCD-H/PDP_RLY	6	6 ← 25	25	LCD-H/PDP_RLY
NC S_DET	5	5 → 26	26	S_DET
———	4	4 → 27	27	———
SW_YUV1/2	3	3 ← 28	28	SW_YUV1/2
———	2	2 → 29	29	———
LIGHT CTL/PSU_5VD	1	1 → 30	30	LIGHT CTL/PSU_5VD NC

CP4203		FFC CD4203	CP803	
———	29	29 → 1	1	———
DTUNER_H	28	28 → 2	2	DTUNER_H
DTV_MUTE_L	27	27 → 3	3	DTV_MUTE_L
———	26	26 → 4	4	———
DTUNER_RX	25	25 → 5	5	DTUNER_RX
GND	24	24 → 6	6	GND
DTUNER_TX	23	23 → 7	7	DTUNER_TX
GND	22	22 → 8	8	GND
DTUNER_RESET_L	21	21 → 9	9	DTUNER_RESET_L
GND	20	20 → 10	10	GND
SW_AUDIO_R(PC)	19	19 ← 11	11	SW_AUDIO_R(PC)
GND	18	18 → 12	12	GND
SW_AUDIO_L(PC)	17	17 ← 13	13	SW_AUDIO_L(PC)
———	16	16 → 14	14	———
STEREO_RESET	15	15 → 15	15	STEREO_RESET
———	14	14 → 16	16	———
NC SCART_AUDIO_SW	13	13 ← 17	17	SCART_AUDIO_SW
SDA1	12	12 ↔ 18	18	SDA1
SCL1	11	11 → 19	19	SCL1
GND	10	10 → 20	20	GND
DTUNER_POWER	9	9 ← 21	21	DTUNER_POWER
GND	8	8 → 22	22	GND
DTUNER_SD_H	7	7 → 23	23	DTUNER_SD_H
GND	6	6 → 24	24	GND
SWITCH_CVBS	5	5 → 25	25	SWITCH_CVBS
GND	4	4 → 26	26	GND
SWITCH_VIDEO_Y	3	3 → 27	27	SWITCH_VIDEO_Y
GND	2	2 → 28	28	GND
SWITCH_VIDEO_C	1	1 → 29	29	SWITCH_VIDEO_C

CP901		CD901	CP3602	
HDMI_I2SSCK/MCKL	4	←	4	HDMI_I2SSCK/MCKL
HDMI_I2SSDO	3	←	3	HDMI_I2SSDO
HDMI_I2SWS	2	←	2	HDMI_I2SWS
GND	1		1	GND

CP3807		CD3807	CP3201	
P.CON12V	1	→	1	P.CON12V
P.CON+9V	2	→	2	P.CON+9V
P.CON+5V	3	→	3	P.CON+5V
AT3.3V	4	→	4	AT3.3V
P.CON+3.8V	5	→	5	P.CON+3.8V
P.CON+3.8V	6	→	6	P.CON+3.8V
GND	7	→	7	GND
GND	8	→	8	GND
GND	9	→	9	GND
P.CON+5V	10	→	10	P.CON+5V
AT+5V	11	→	11	AT+5V

AUDIO OUT J4201 — R, L
COAXIAL JACK J4202

AUDIO IN(DVI1/PC) J4301 — WHITE L, RED R

SCALER PCB
PCBDS0
CEF156

CP3601		CP3603		CP7203	
DET	19	DET	19	GND	1
POWER	18	POWER	18	VDD+5V/12V	2
GND	17	GND	17	VDD+5V/12V	3
SDA	16	SDA	16	VDD+5V/12V	4
SCL	15	SCL	15	VDD+5V/12V	5
———	14	———	14	GND	6
———	13	———	13	GND	7
CLK-	12	CLK-	12	GND	8
CLK-S	11	CLK-S	11	GND	9
CLK+	10	CLK+	10	VDD+3.3V/NC/GND	10
D0-	9	D0-	9	NC NC/GND	11
D0-S	8	D0-S	8	GND	12
D0+	7	D0+	7	RXIN0-	13
D1-	6	D1-	6	RXIN0+	14
D1-S	5	D1-S	5	GND	15
D1+	4	D1+	4	RXIN1-	16
D2-	3	D2-	3	RXIN1+	17
D2-S	2	D2-S	2	GND	18
D2+	1	D2+	1	RXIN2-	19
				RXIN2+	20
				GND	21
				RXCLK IN-	22
				RXCLK IN+	23
				GND	24
				RXIN3-	25
				RXIN3+	26
				GND	27
				VDD+3.3V/NC/GND	28
				VDD+3.3V/NC/GND	29
				NC NC/GND	30
				NC VDD+3.3V/GND	31
				GND	32

TO LCD PANEL
CD7204 — PANEL — V2301_1

CP103	
NC	7
RESET	6
CHIP_SELECT	5
4SI_SCL	4
4SI_SDA_IN	3
4SI_SDA_OUT	2
GND	1

CP101	
GND	1
EEPROM_SCL	2
EEPROM_SDA	3
IIC_OFF	4
GND	5

MICON_DATA

CP102	
GND	1
TX	2
BUSY	3
NC ———	4
VCC	5
CLK	6
RX	7
CNVSS	8
RESET	9
GND	10

CP3604A									
UC_SDA	UC_SCL	NC	NC	GND	EN	TX	RX	VCC	
9	8	7	6	5	4	3	2	1	CP3604A

DIGITAL/ANALOG TUNER W/NTSC_MPX
TU5801 — 21, 22

NC	1	OOB
	2	+5V
	3	GND
	4	+30V
NC	5	TU
	6	GND
	7	+5V
	8	AGC
	9	SDA
	10	SCL
	11	AFT
	12	AGC_OUT
	13	V_OUT
	14	+5V
	15	SIF
	16	IF SW
	17	IF OUT
	18	IF AGC
	19	IF_OUT 1
	20	IF_OUT 2

23, 24

COMMAND TRANSMITTER TM101

OS2200	
B+	3
GND	2
Vout	1

CP4202		CD4202	CP2201	
REMOCON IN	1	←	1	REMOCON IN
GND	2		2	GND
AT+5V	3	→	3	AT+5V
STANDBY LED	4	→	4	STANDBY LED
P.ON LED	5	→	5	P.ON LED

REMOCON PCB
PCBDA0
CEF182

OPERATION PCB
PCB270
CEF185

CP2203		CD2201
KEY A	3	→
KEY B	2	→
GND	1	→

CP2200		CD2201
GND	1	→
KEY B	2	→
KEY A	3	→

NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

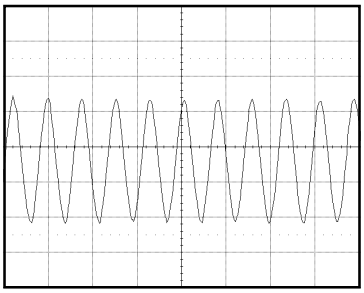
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

WAVEFORMS

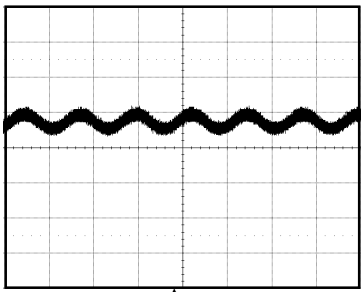
ADC1

20ns
1.0V



①

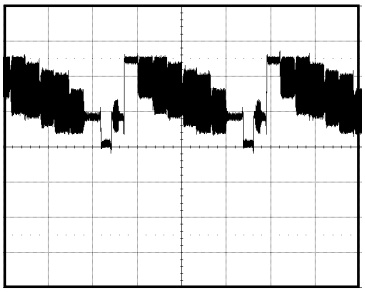
2.0ms
2.0V



⑥

TUNER

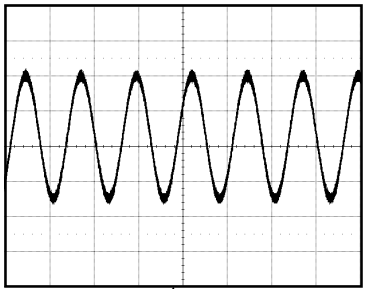
20µs
1.0V



⑪

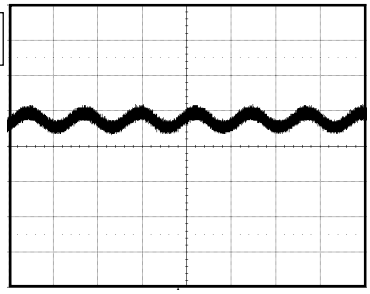
SOUND AMP/HEADPHON AMP

2.0ms
500mV



②

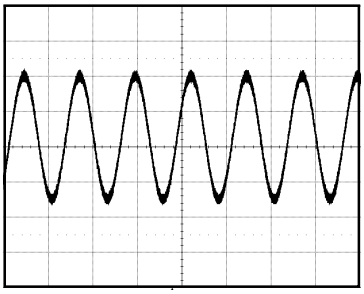
2.0ms
2.0V



⑦

STEREO

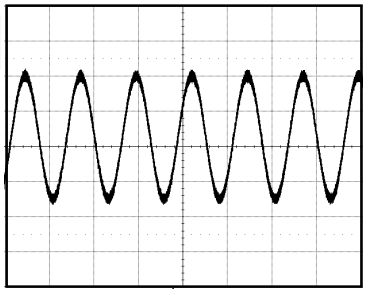
2.0ms
500mV



⑫

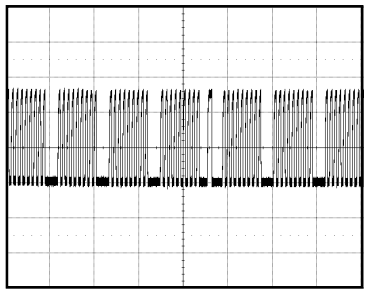
AV SWITCH2

2.0ms
500mV



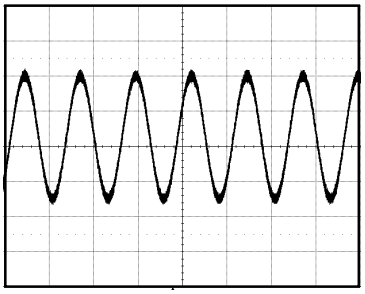
③

100µs
2.0V



⑧

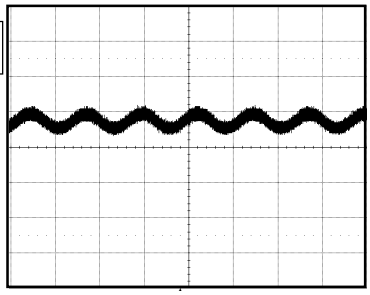
2.0ms
500mV



⑬

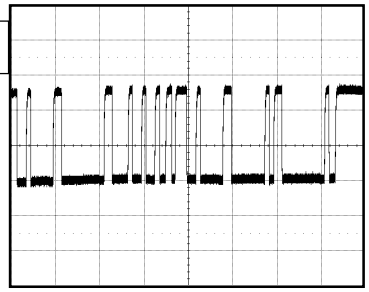
MICON

2.0ms
2.0V



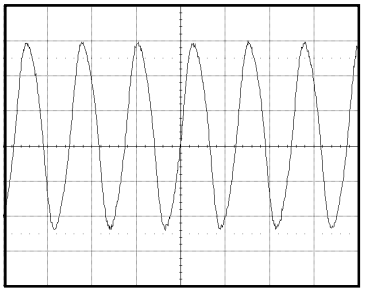
④

100µs
2.0V



⑨

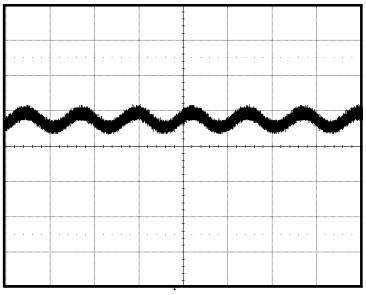
50ns
500mV



⑭

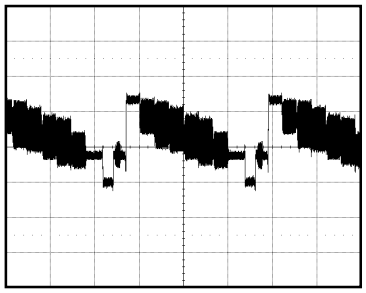
SCALER

2.0ms
2.0V



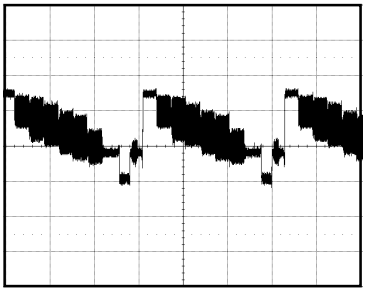
⑤

20µs
500mV



⑩

20µs
500mV



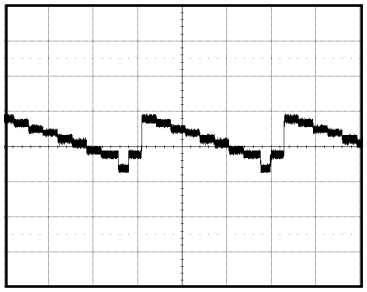
⑮

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

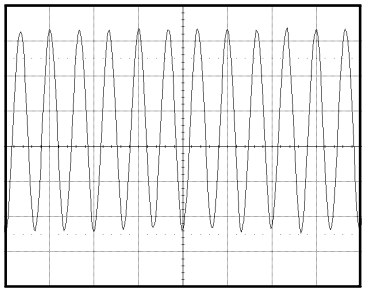
20µs
500mV

16



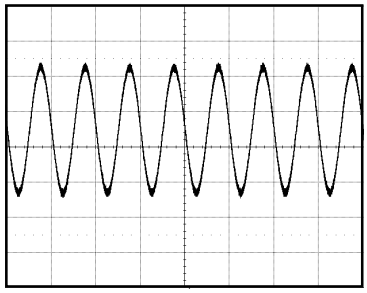
20µs
500mV

21



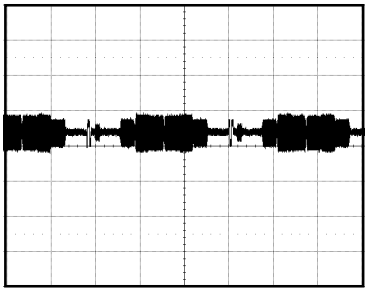
1.0ms
1.0V

26



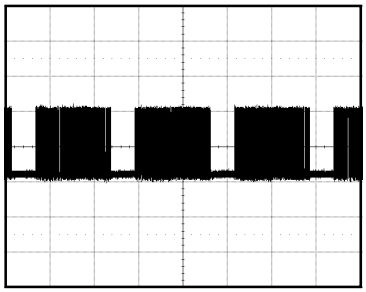
20µs
500mV

17



10µs
2.0V

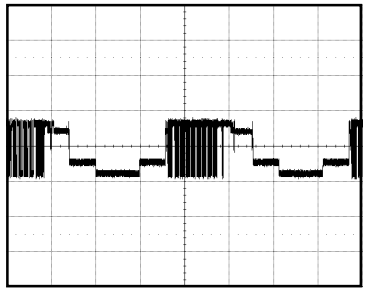
22



ADC1

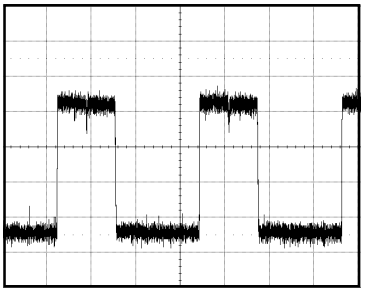
5µs
500mV

27



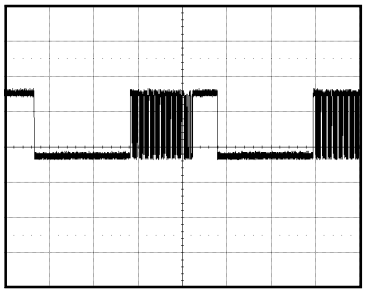
20µs
200mV

18



5µs
2.0V

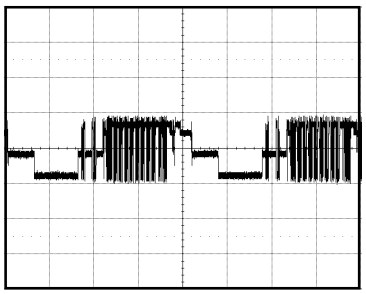
23



ADC1

5µs
500mV

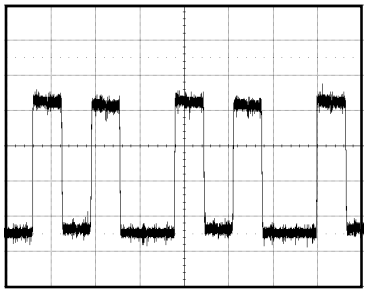
28



LVDS

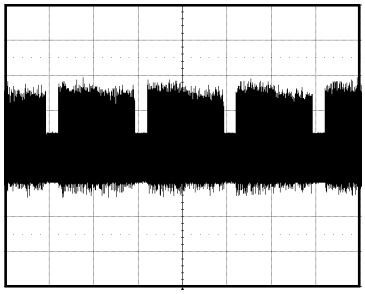
20µs
200mV

19



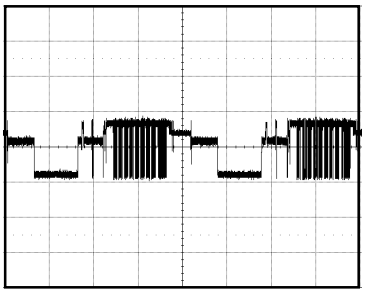
10ms
100mV

24



5µs
500mV

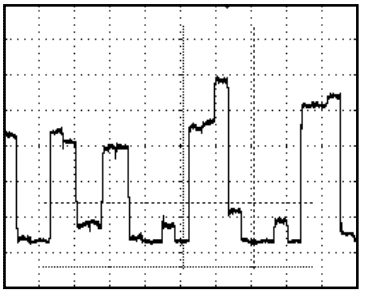
29



JACK

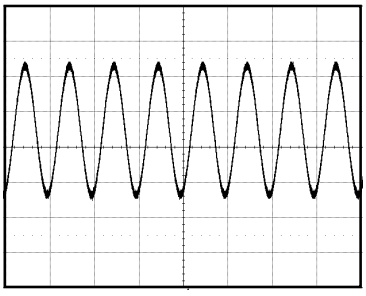
20µs
200mV

20



1.0ms
1.0V

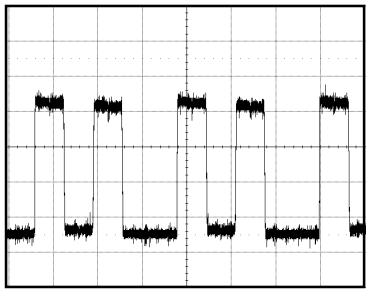
25



INTERFACE_HDMI IC

20µs
1.0V

30

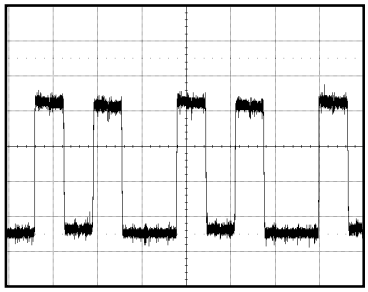


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

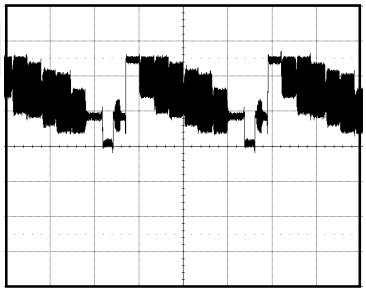
20µs
1.0V

(31)



20µs
1.0V

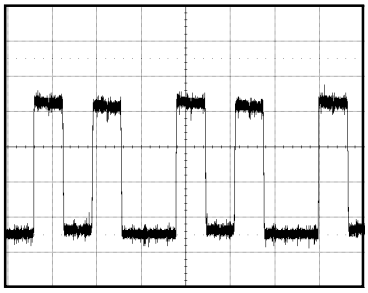
(36)



ASIC

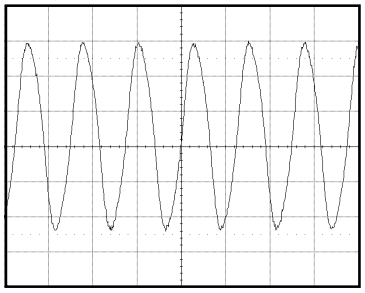
20µs
1.0V

(32)



10ns
50mV

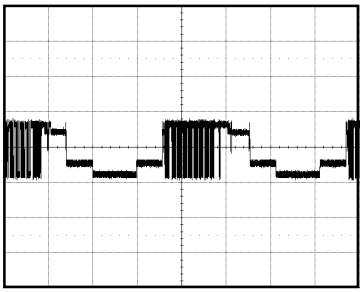
(37)



AV OUT

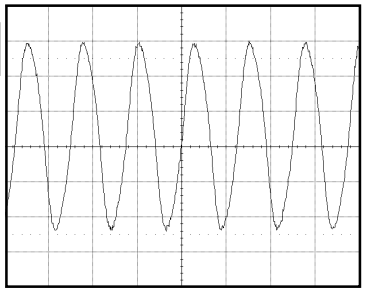
5µs
2.0V

(33)



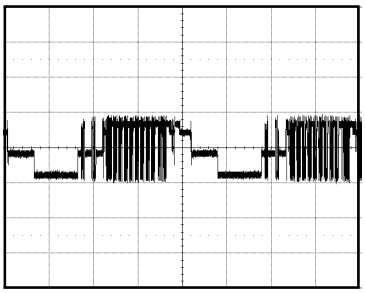
20ns
50mV

(38)



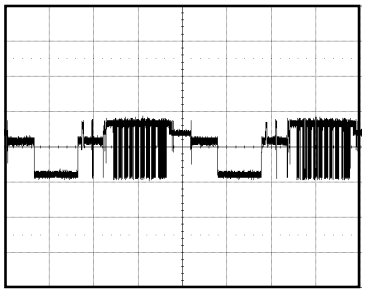
5µs
2.0V

(34)



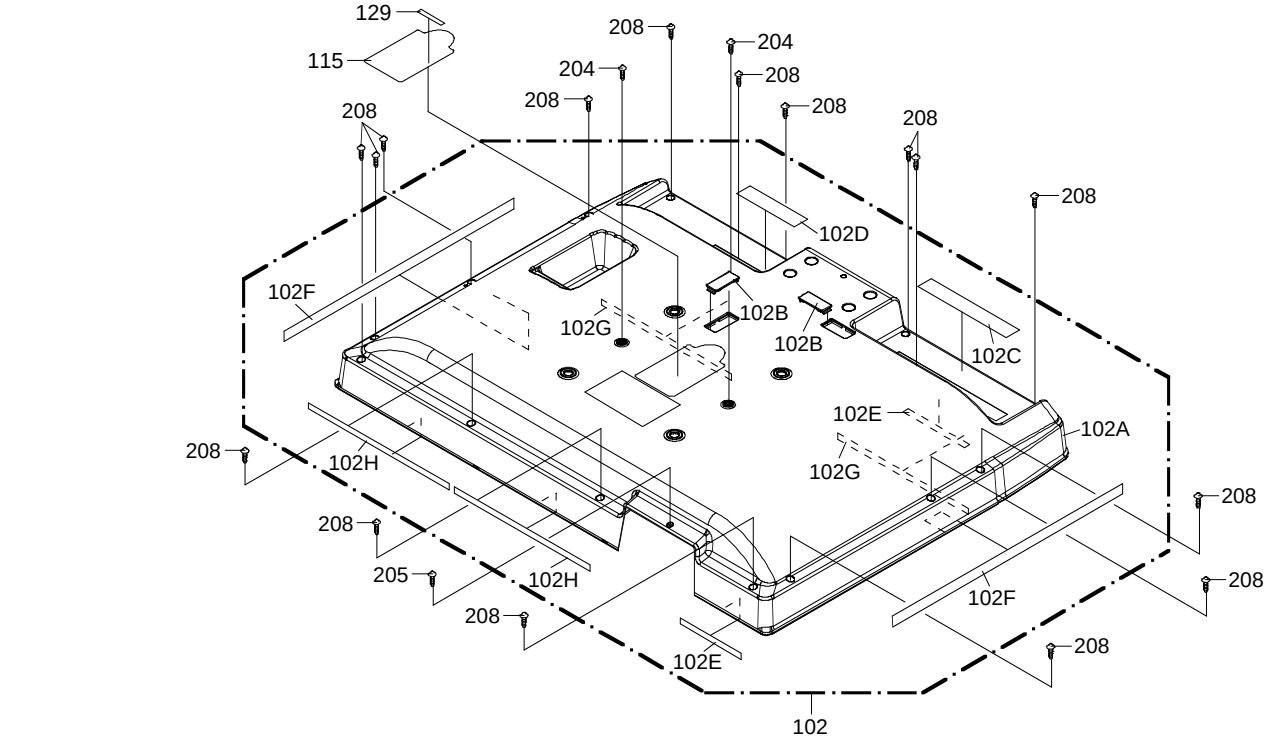
5µs
2.0V

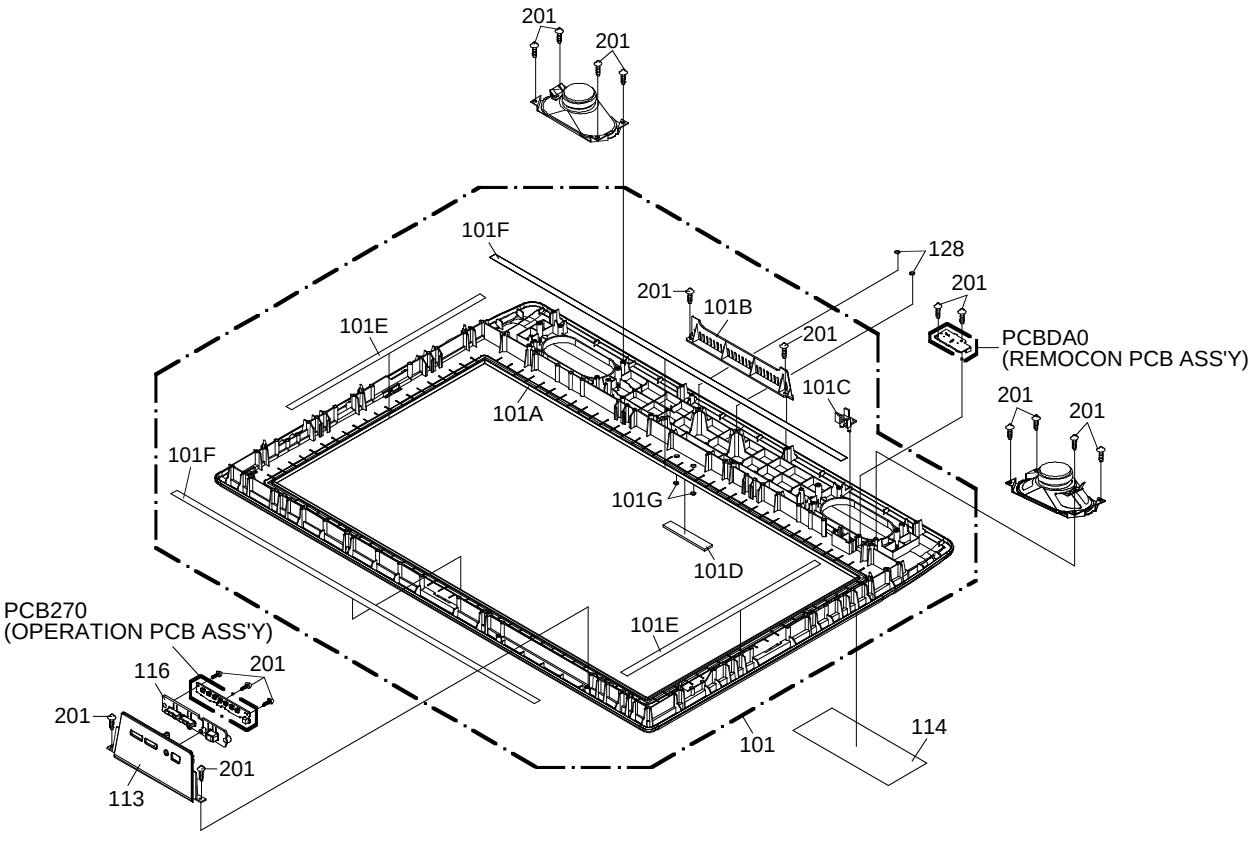
(35)



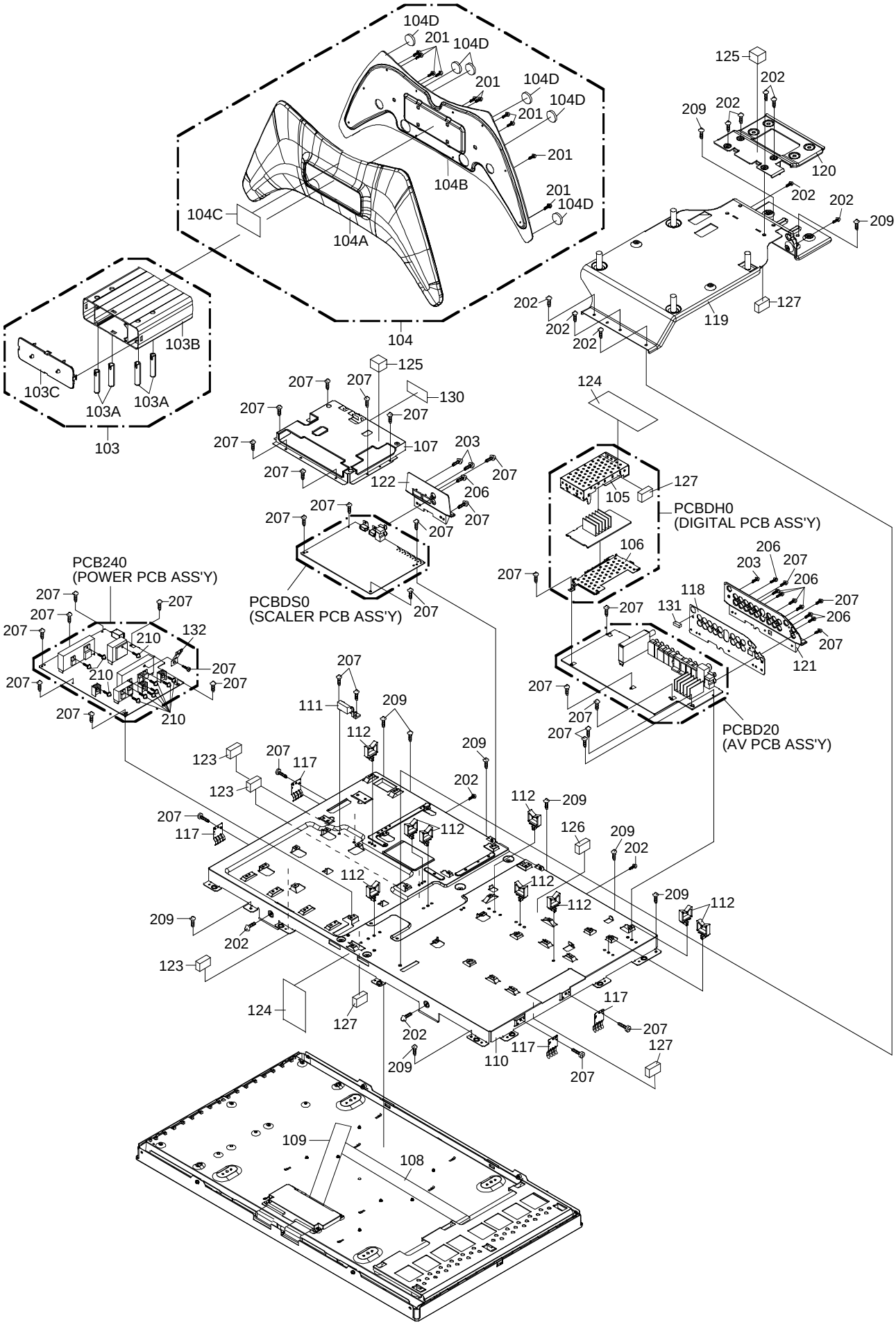
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

MECHANICAL EXPLODED VIEW





MECHANICAL EXPLODED VIEW



MECHANICAL REPLACEMENT PARTS LIST

REF No.	PART NO.	DESCRIPTION
101	7A701A749A-S	FRONT, CABI ASSY
102	7A702A227A-S	BACK, CABI ASSY
103	7A764A002A-S	FRAME, STAND ASSY
104	7A704A020A-S	STAND ASSY
108	753WEA0031-S	SHEET, CU
109	753WEA0034-S	SHEET, CU
113	711WPD0702-S	PLATE, BUTTON
115	722678A002-S	SHEET, RATING
116	735WPB0334-S	BUTTON, FRAME
119	761WSA0331-S	ANGLE, BACK-1
	774WPA0010-S	HOLDER, CORD
124	890MP2401A-S	TAPE 50x35
130	890MP2401G-S	TAPE 30x12
201	8110630A0U-S	SCREW TAP TITE(P) BRAZIER 3x10
202	810A14080U-S	SCREW WASHER(A) M4x8
203	810213080S-S	SCREW, PAN M3x8
204	810223080S-S	SCREW, BIND M3x8
205	8110630A0S-S	SCREW TAP TITE(P) BRAZIER 3x10
206	810923080S-S	SCREW, TAP TITE(B) BIND 3X8
207	810923080U-S	SCREW, TAP TITE(B) BIND 3X8
208	8110230A4S-S	SCREW, TAP TITE(P) BIND 3X14
209	8117540A2U-S	SCREW, TAPPING(B0) TRUSS 4X12
	890GDA1A24-S	SCREW
	A3Y107G975-S	INSTRUCTION BOOK KIT
	5188-3634	Remote Control

ELECTRICAL REPLACEMENT PARTS LIST

REF No.	PART NO.	DESCRIPTION	
PC Board Assemblies			
PCB240	A3Y107G240-S	PCB ASSY(power board)	CEF171A
PCB270	A3Y107G270-S	PCB ASSY(switch operation)	CEF185A
PCBD20	A3Y107GD20-S	PCB ASSY(AV board)	CMF080A
PCBDA0	A3Y107GDA0-S	PCB ASSY(remote control)	CEF182A
PCBDH0	A3Y107GDH0-S	PCB ASSY(digital board)	CEF169A
PCBDS0	A3Y107GDS0-S	PCB ASSY(scalar board)	CEF156A
MISCELLANEOUS			
CD301	06CU123401-S	CORD, CONNECTOR	CU123401
CD303	06CU128001-S	CORD, CONNECTOR	CU128001
CD505	06CU2E5401-S	CORD, CONNECTOR	CU2E5401
CD901	06CU248101-S	CORD, CONNECTOR	CU248101
CD2201	06CU236302-S	CORD, CONNECTOR	CU236302
CD3801	1209119904-S	CORD, SET AC	9119904
CD3802	06CU124001-S	CORD, CONNECTOR	CU124001
CD3803	06CU1C4501-S	CORD, CONNECTOR	CU1C4501
CD3804	06CU174001-S	CORD, CONNECTOR	CU174001
CD3805	06CU145003-S	CORD, CONNECTOR	CU145003
CD3806	06CU274502-S	CORD, CONNECTOR	7PIN L=450MM P=2.0MM
CD3807	06CU2B6601-S	CORD, CONNECTOR	CU2B6601
CD4202	06CU256001-S	CORD, CONNECTOR	CU256001
CD4203	122HOT1801-S	CORD, JUMPER	2HOT1801
CD4204	122HOU1802-S	CORD, JUMPER	2HOU1802
CD7204	06CHRU3201-S	CORD, CONNECTOR	CHRU3201
F501	081PC6R305-S	FUSE	51MS063L
F502	0835A07005-S	MICRO FUSE	20N_700FSW
SP301	0701016002-S	SPEAKER	EAS12D175B
V2301	09E4132004-S	LCD	LK315T3LZ4C

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